Suggested Details of

CONCRETE MASONRY Construction

PORTLAND CEMENT ASSOCIATION 33 W. GRAND AVE., CHICAGO 10, ILL.

ON THE following pages are assembled a number of drawings illustrating various recommended details for concrete masonry design and construction.

These drawings have been prepared in accordance with modular coordination of design. The grid lines shown on the drawings are module lines based on a 4-in. module. All drawings with grid lines are to a scale of 1 in. = 1 ft.

On the last two pages are shown some of the patterns used in concrete masonry construction. These may suggest other patterns to the designer.

PORTLAND CEMENT ASSOCIATION

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SUGGESTED DETAILS OF CONCRETE MASONRY CONSTRUCTION

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The drawings in this publication are typical designs and should not be used as working drawings. They are intended to be helpful in the preparation of complete plans which should be adapted to local conditions and should conform with legal requirements. Working drawings should be prepared and approved by a qualified engineer or architect.

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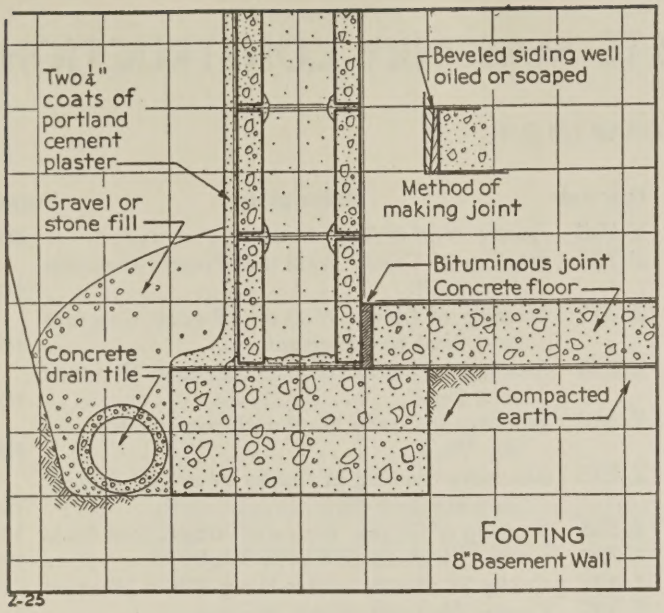

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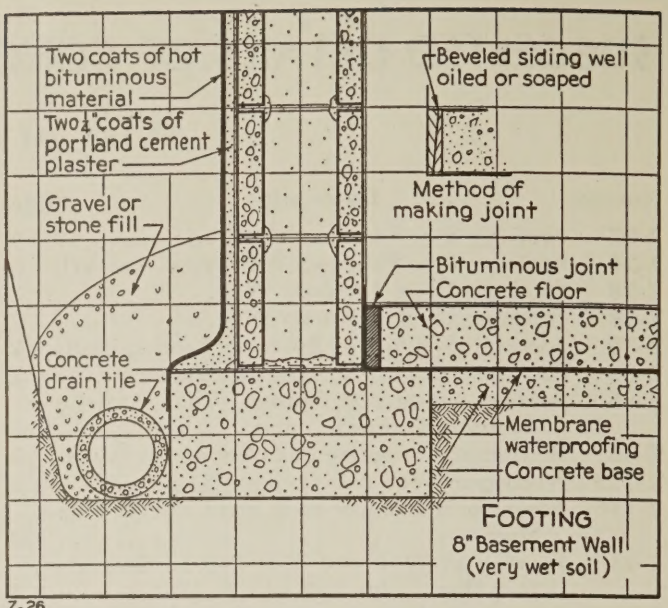

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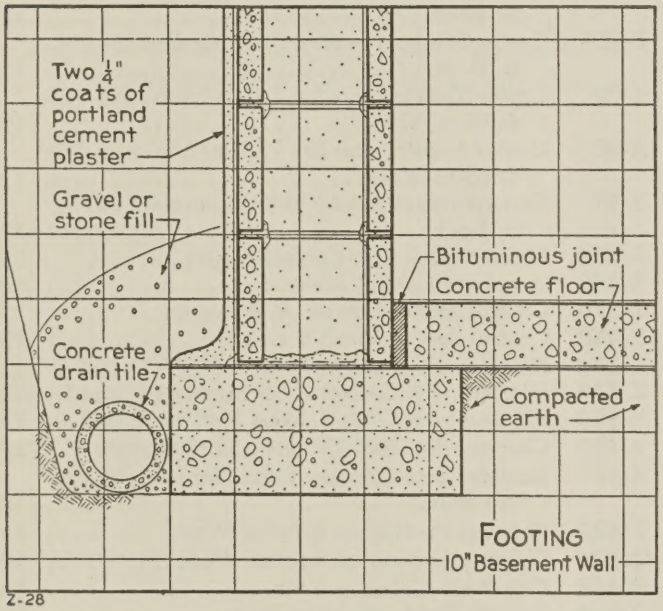

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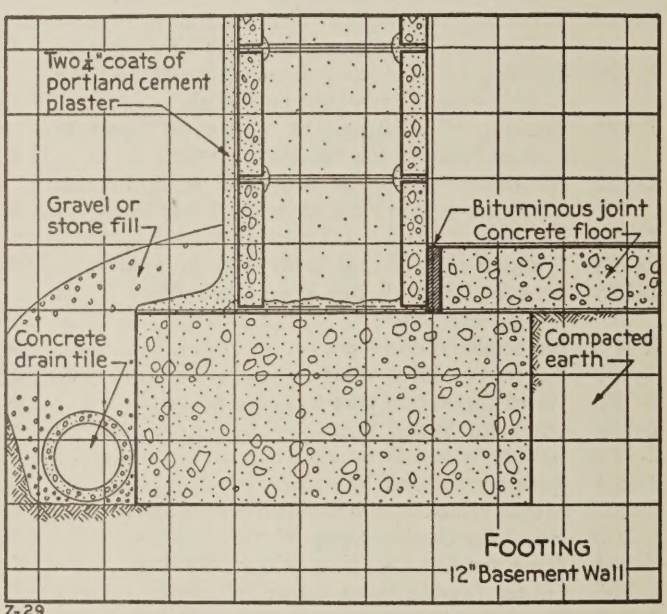

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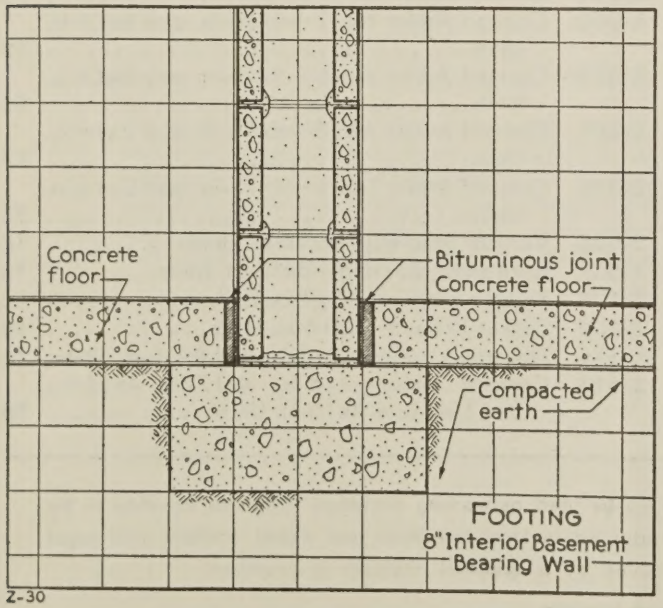

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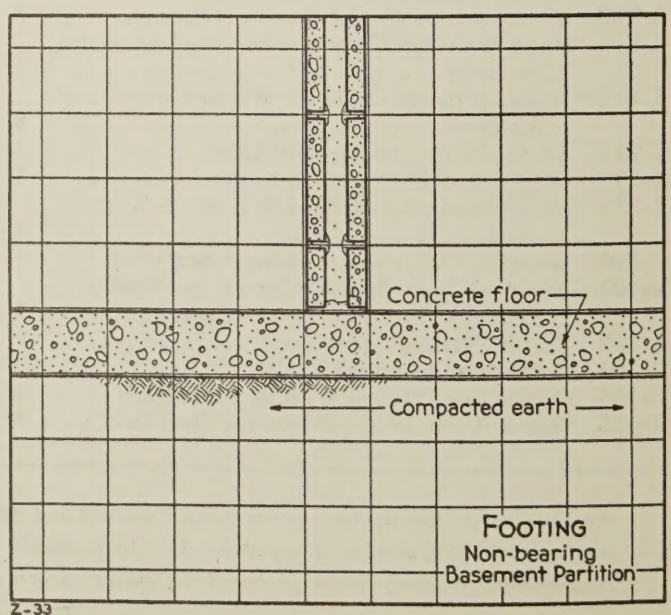

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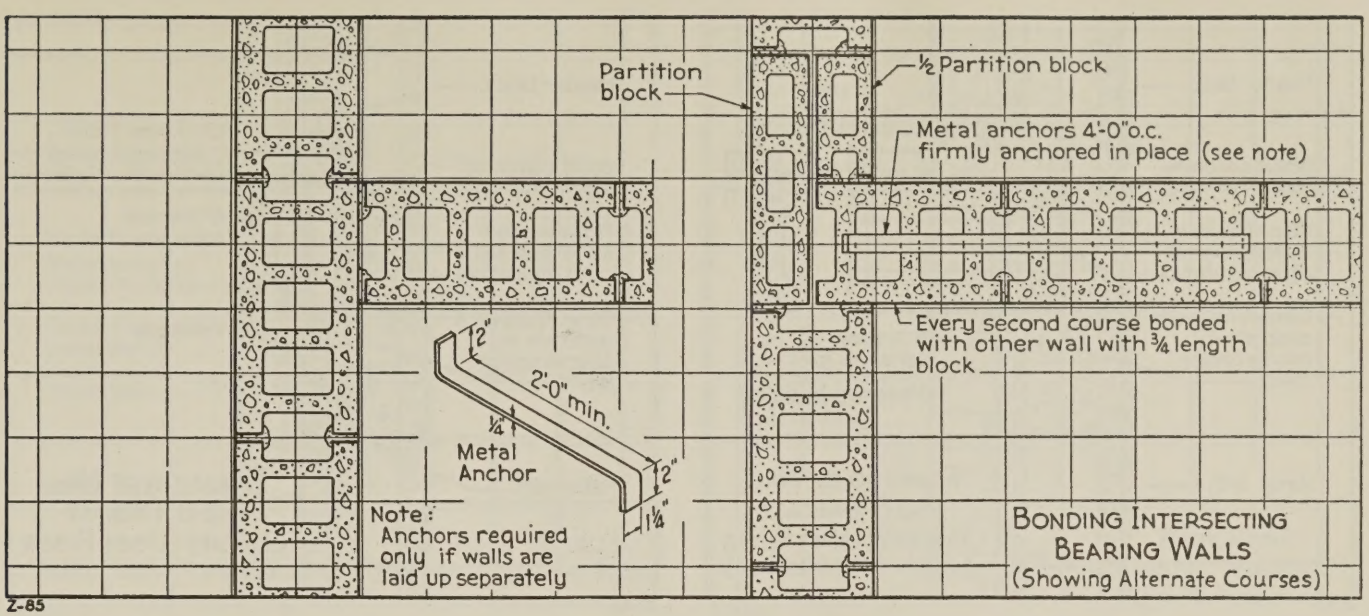

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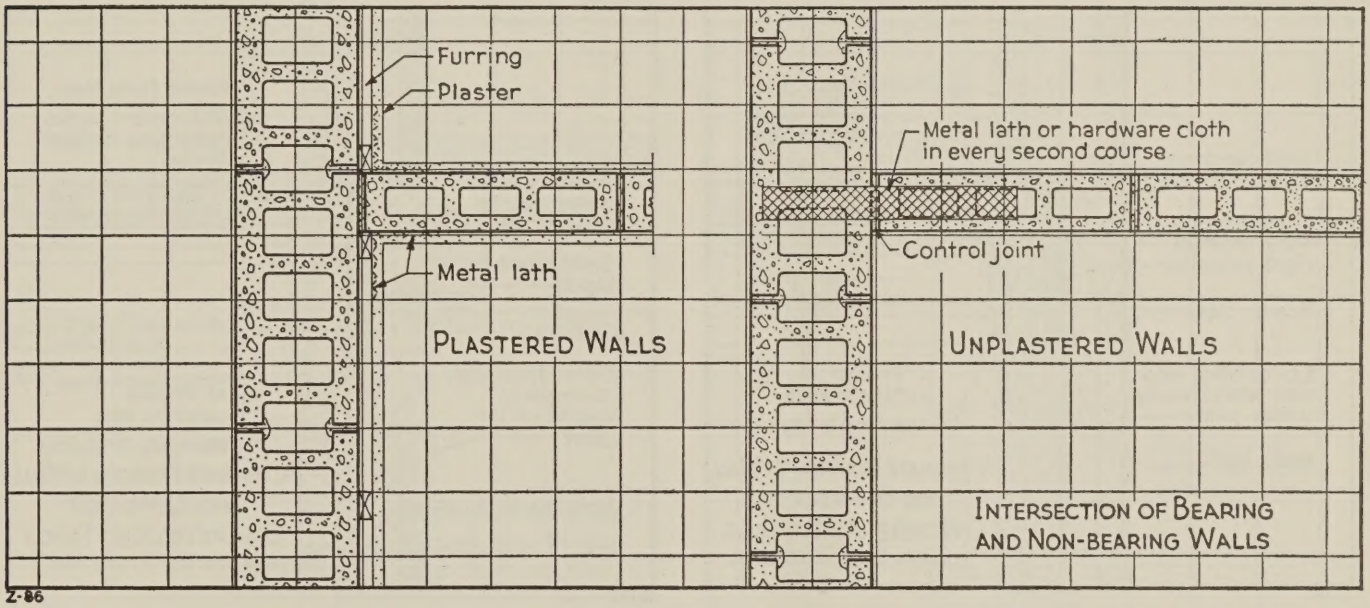

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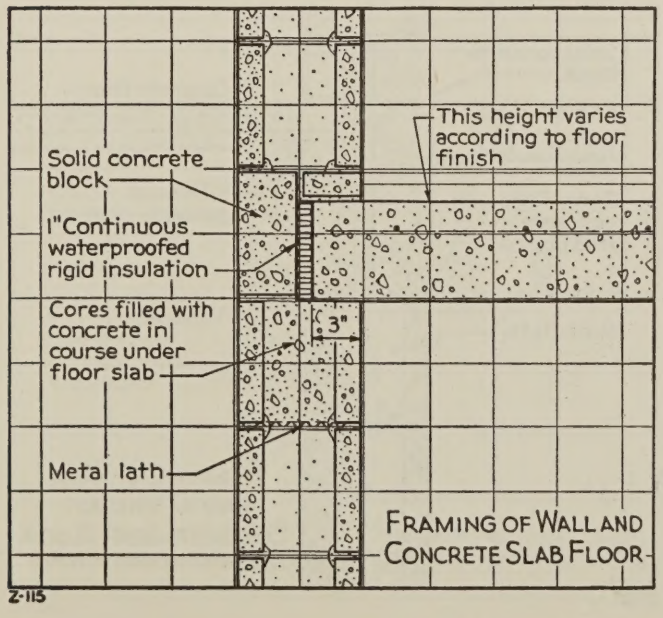
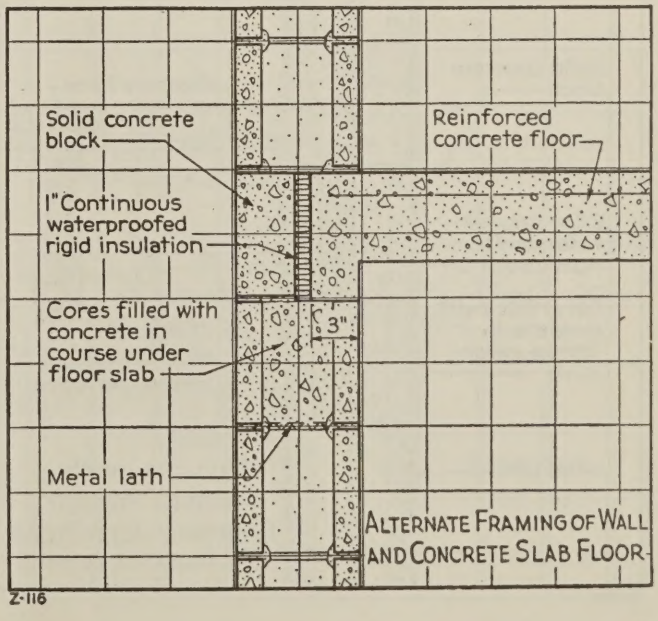
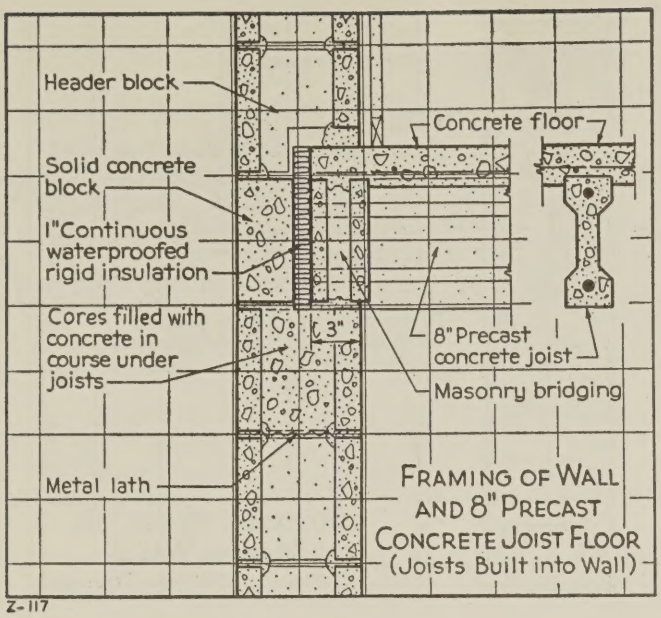
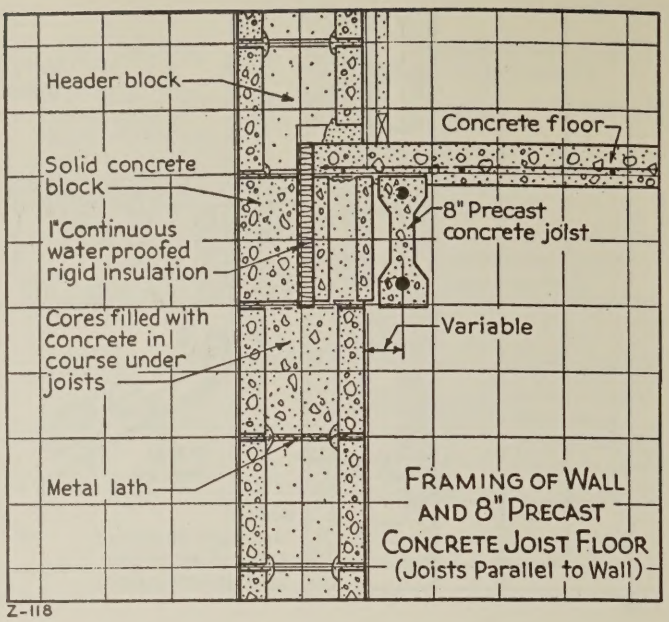

This height varies according to floor finish
Solid concrete block
1" Continuous waterproofed rigid insulation
Cores filled with concrete in course under floor slab
3"
Metal lath
FRAMING OF WALL AND CONCRETE SLAB FLOOR

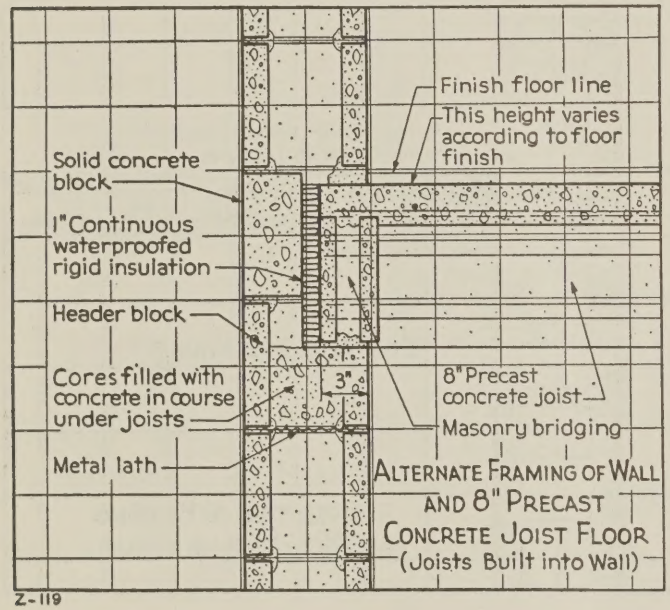
Z-115

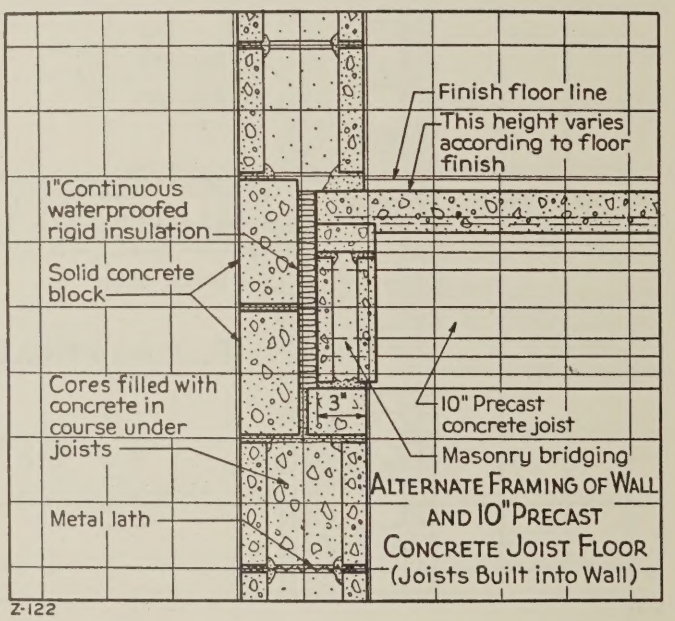

Solid concrete block
Reinforced concrete floor
1" Continuous waterproofed rigid insulation
Cores filled with concrete in course under floor slab
3"
Metal lath
ALTERNATE FRAMING OF WALL AND CONCRETE SLAB FLOOR

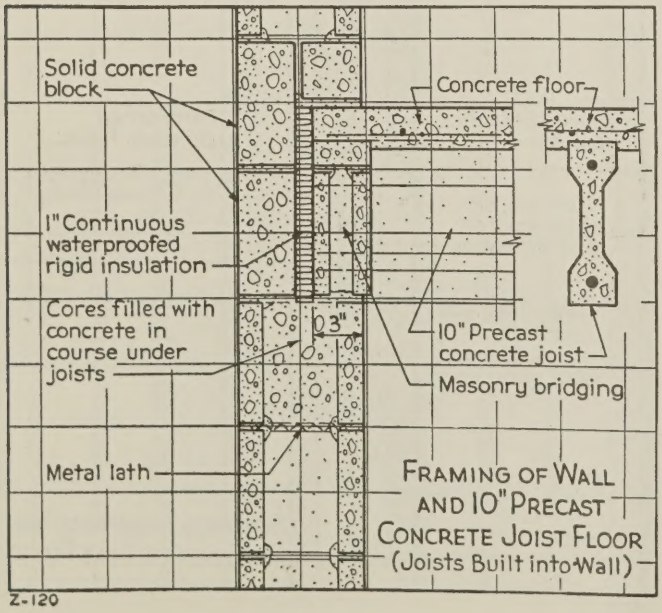
Z-116

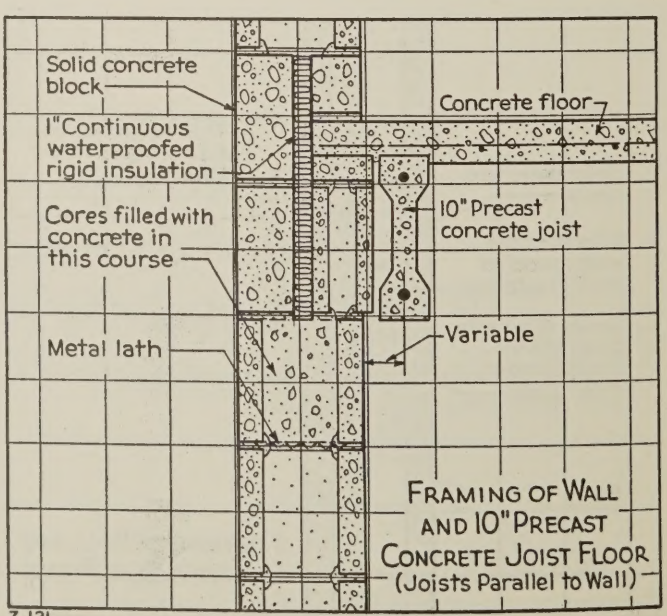

Header block
Concrete floor
Solid concrete block
1"Continuous waterproofed rigid insulation
Cores filled with concrete in course under joists
3"
8" Precast concrete joist
Masonry bridging
Metal lath
FRAMING OF WALL AND 8" PRECAST CONCRETE JOIST FLOOR (Joists Built into Wall)
Z-117

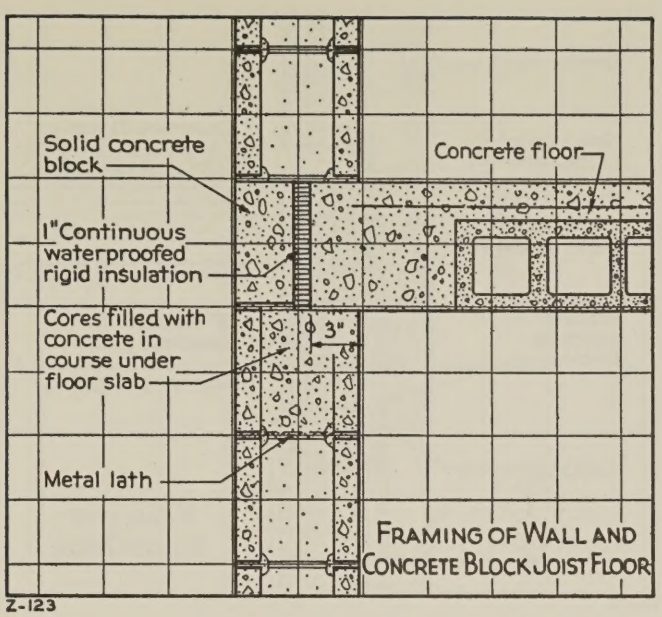

Header block
Concrete floor
Solid concrete block
1"Continuous waterproofed rigid insulation
8" Precast concrete joist
Cores filled with concrete in course under joists
Variable
Metal lath
FRAMING OF WALL AND 8" PRECAST CONCRETE JOIST FLOOR (Joists Parallel to Wall)
Z-118


Finish floor line
This height varies according to floor finish
Solid concrete block
1"Continuous waterproofed rigid insulation
Header block
Cores filled with concrete in course under joists
3"
8" Precast concrete joist
Masonry bridging
Metal lath
ALTERNATE FRAMING OF WALL AND 8" PRECAST CONCRETE JOIST FLOOR (Joists Built into Wall)
Z-119

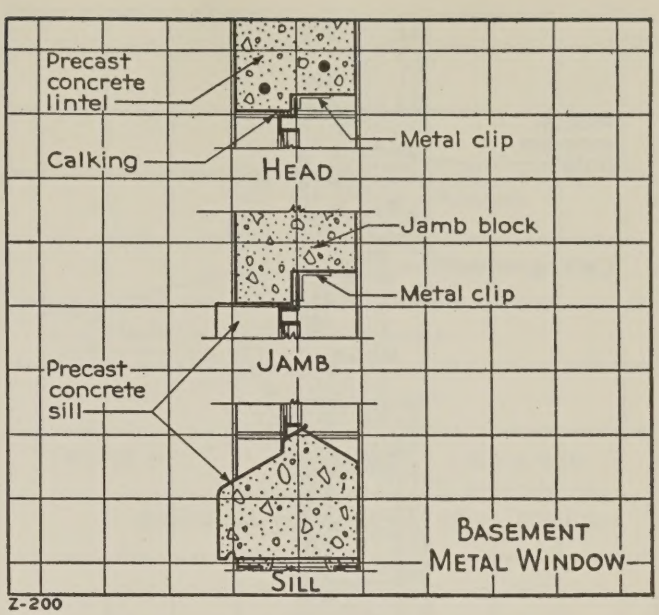

Finish floor line
This height varies according to floor finish
1"Continuous waterproofed rigid insulation
Solid concrete block
Cores filled with concrete in course under joists
3"
10" Precast concrete joist
Masonry bridging
Metal lath
ALTERNATE FRAMING OF WALL AND 10" PRECAST CONCRETE JOIST FLOOR (Joists Built into Wall)
Z-122


Solid concrete block
Concrete floor
1"Continuous waterproofed rigid insulation
Cores filled with concrete in course under joists
3"
10" Precast concrete joist
Masonry bridging
Metal lath
FRAMING OF WALL AND 10" PRECAST CONCRETE JOIST FLOOR (Joists Built into Wall)
Z-120


Solid concrete block
Concrete floor
1"Continuous waterproofed rigid insulation
Cores filled with concrete in this course
10" Precast concrete joist
Variable
Metal lath
FRAMING OF WALL AND 10" PRECAST CONCRETE JOIST FLOOR (Joists Parallel to Wall)
Z-121


Solid concrete block
Concrete floor
1"Continuous waterproofed rigid insulation
Cores filled with concrete in course under floor slab
3"
Metal lath
FRAMING OF WALL AND CONCRETE BLOCK JOIST FLOOR

Z-123



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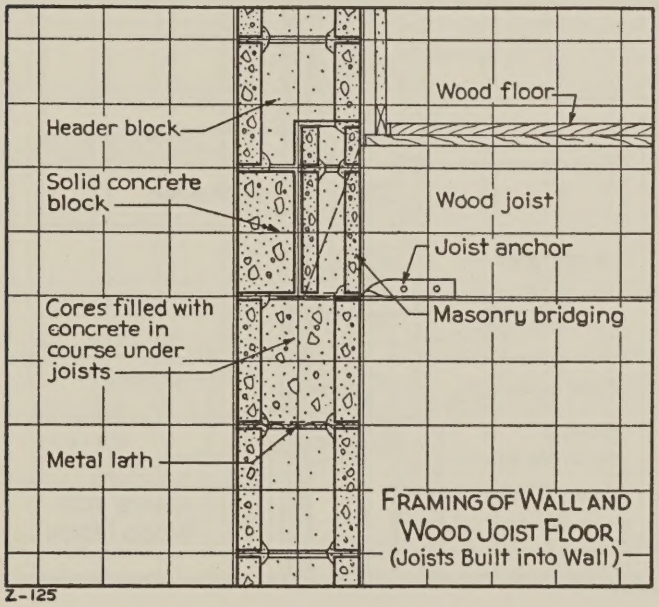

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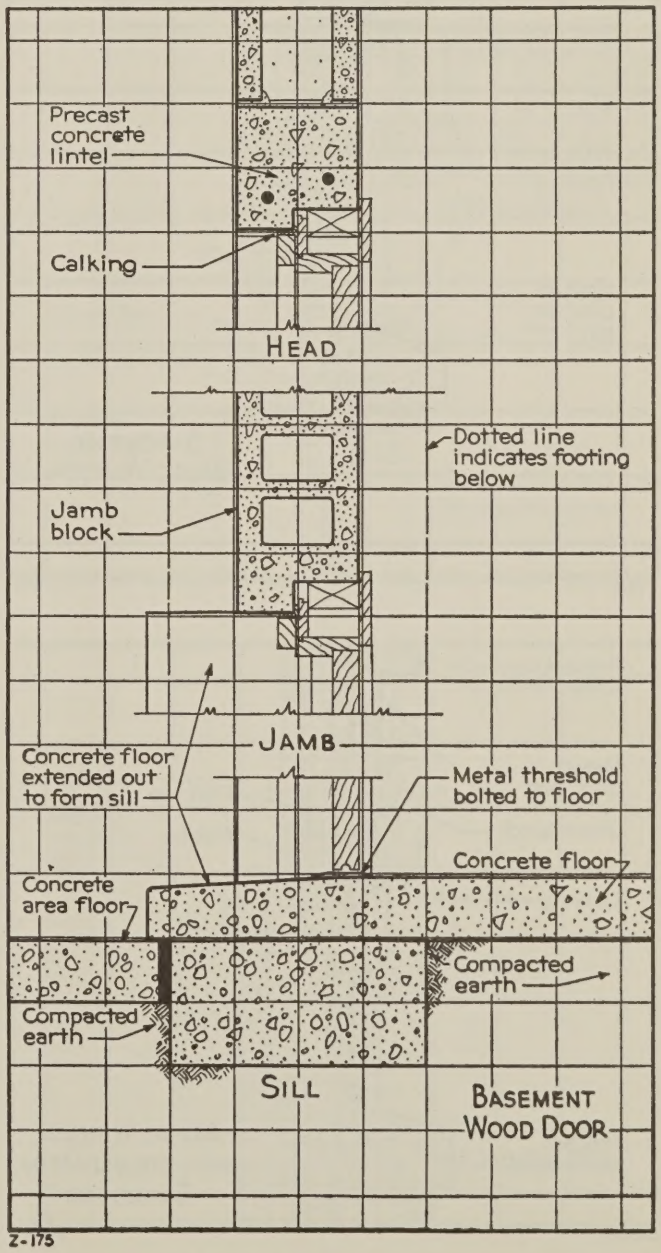

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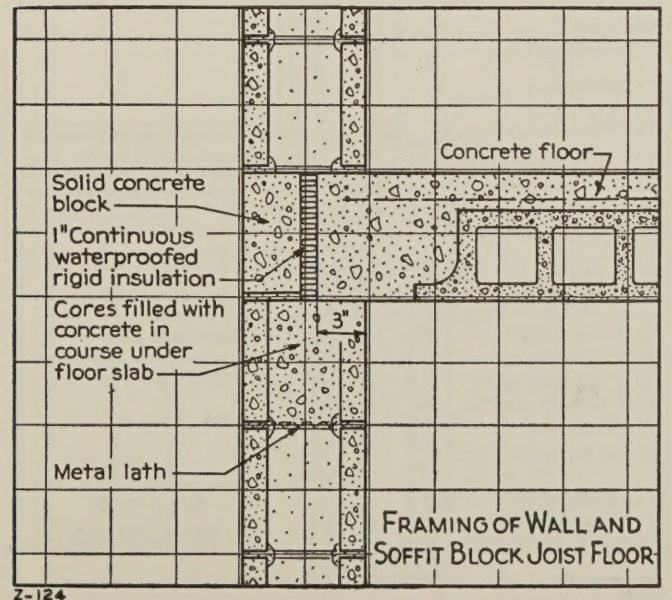
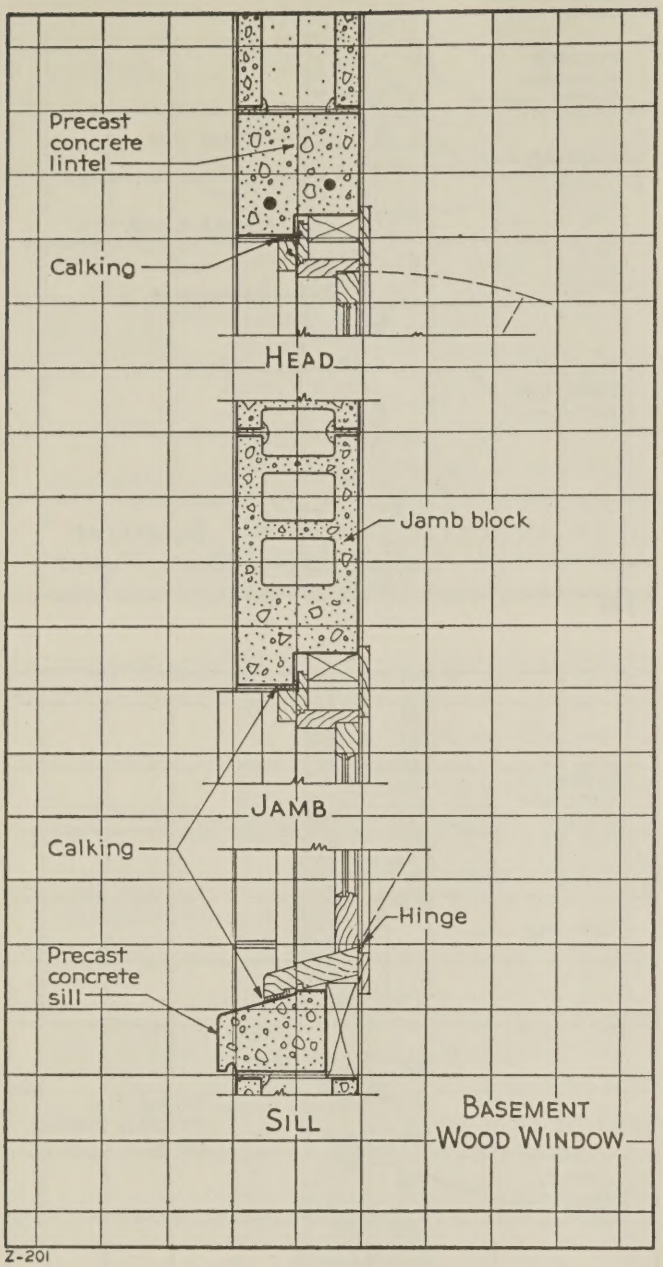

Concrete floor
Solid concrete block
1"Continuous waterproofed rigid insulation
Cores filled with concrete in course under floor slab
3"
Metal lath
FRAMING OF WALL AND SOFFIT BLOCK JOIST FLOOR

Z-124



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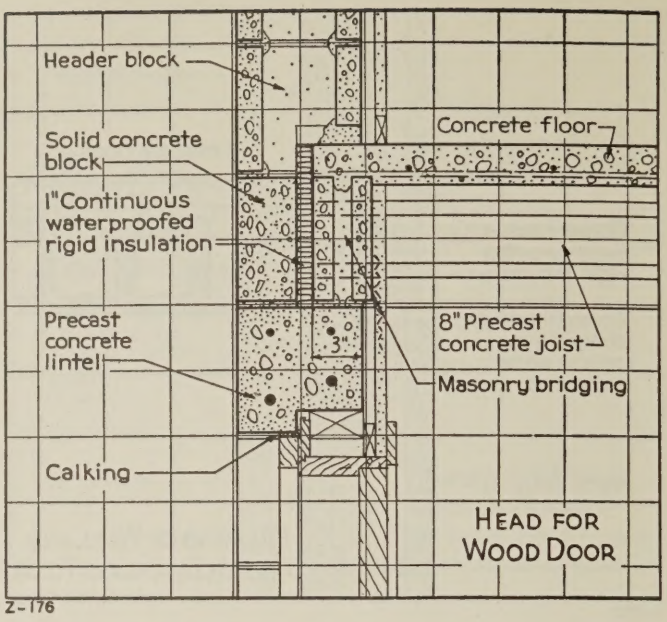

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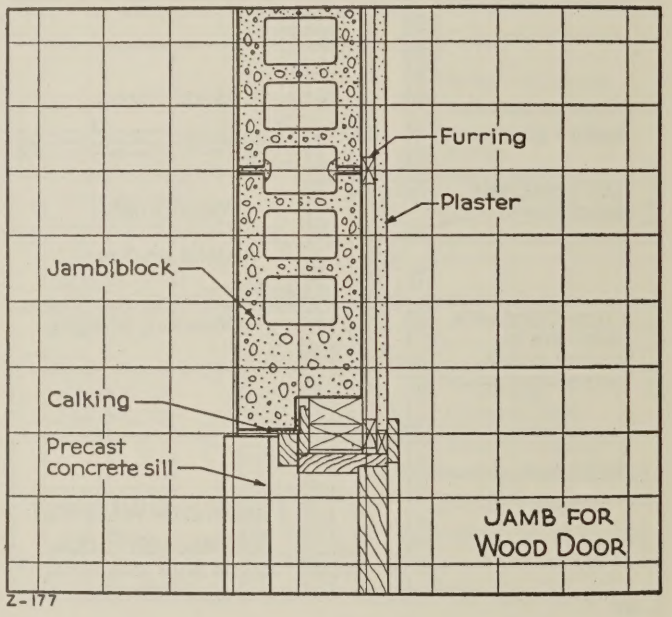

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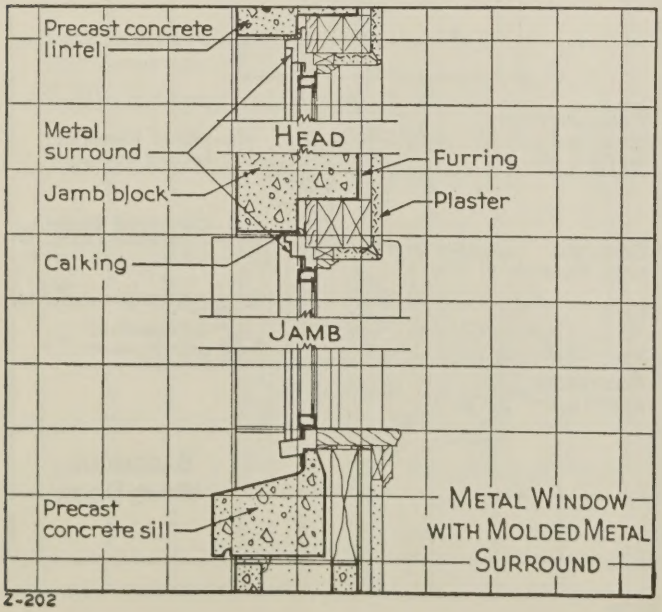

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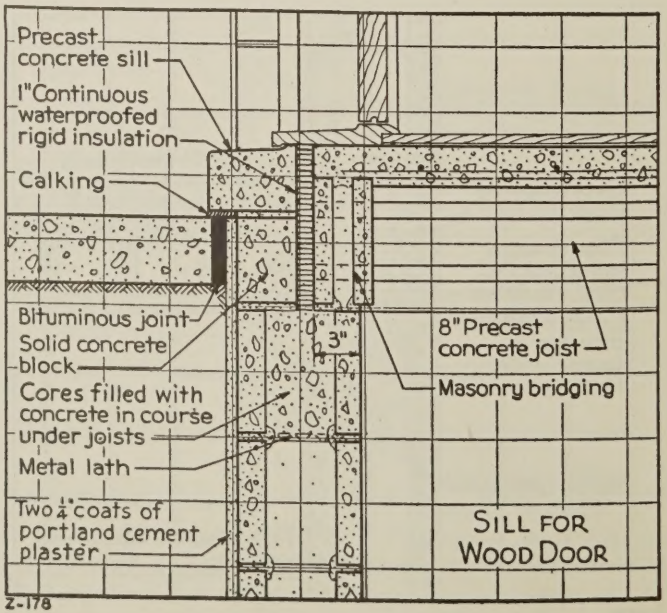

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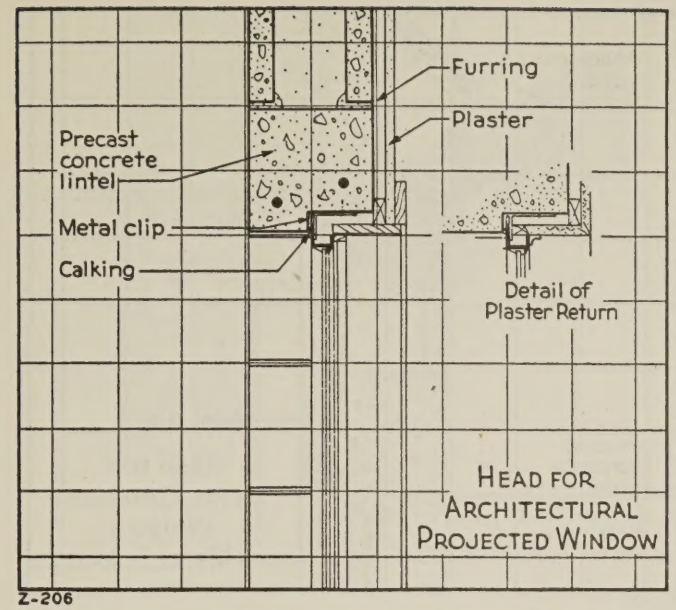

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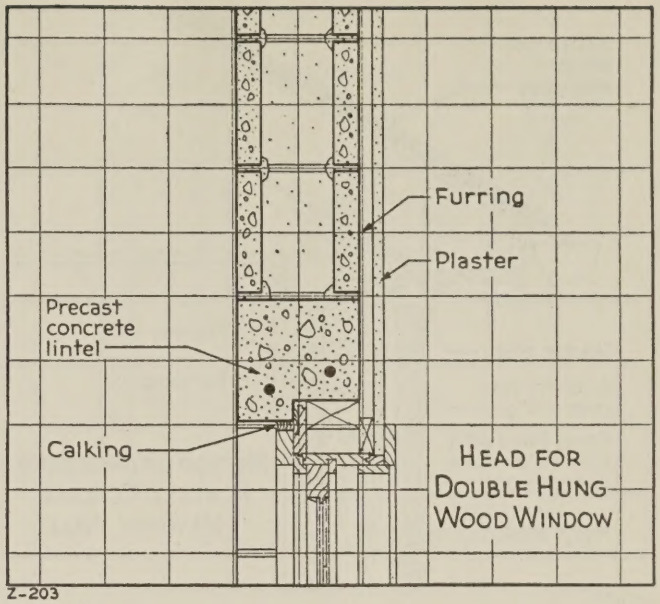

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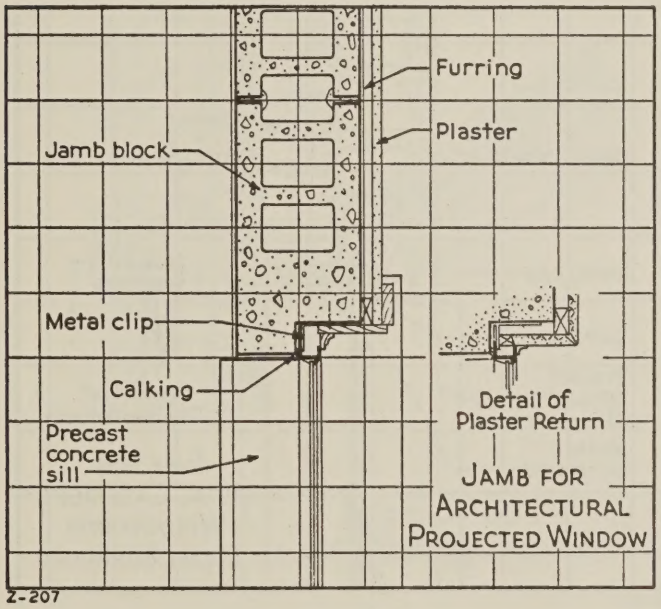

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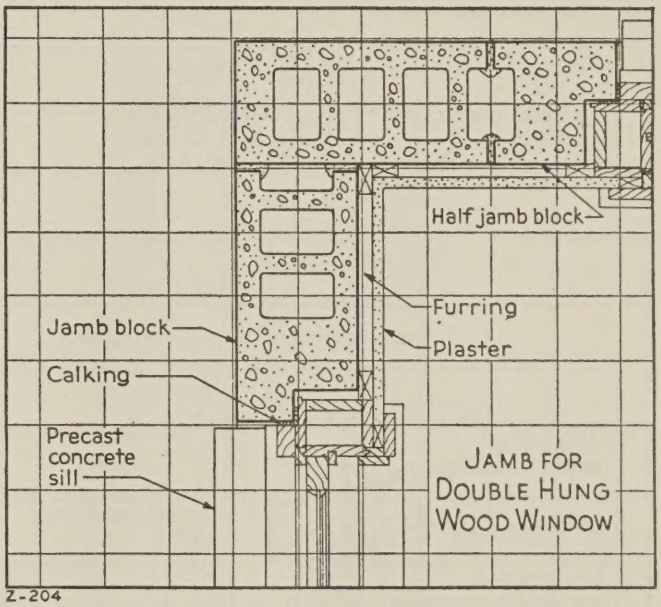

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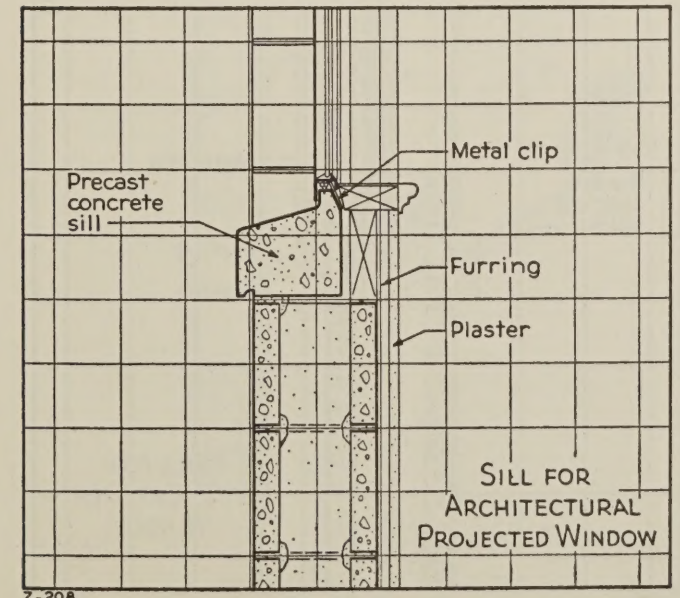

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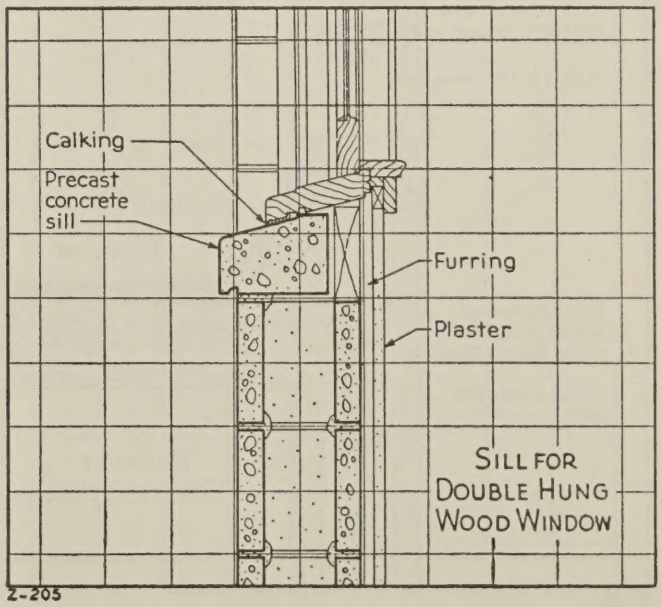

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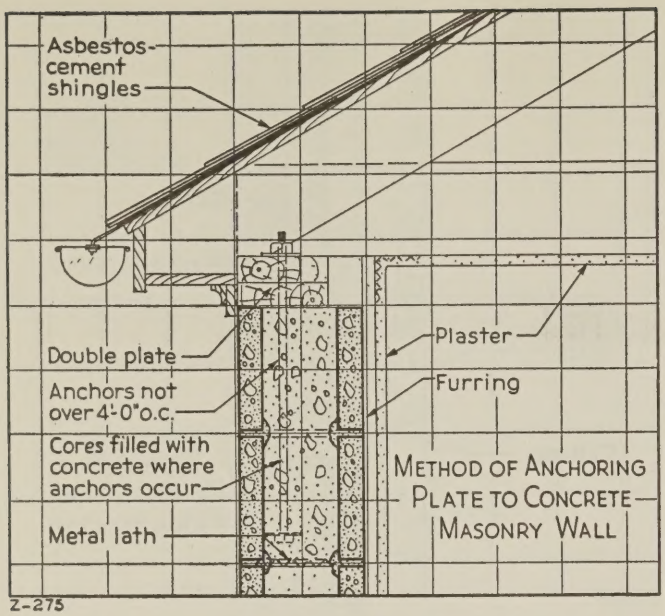

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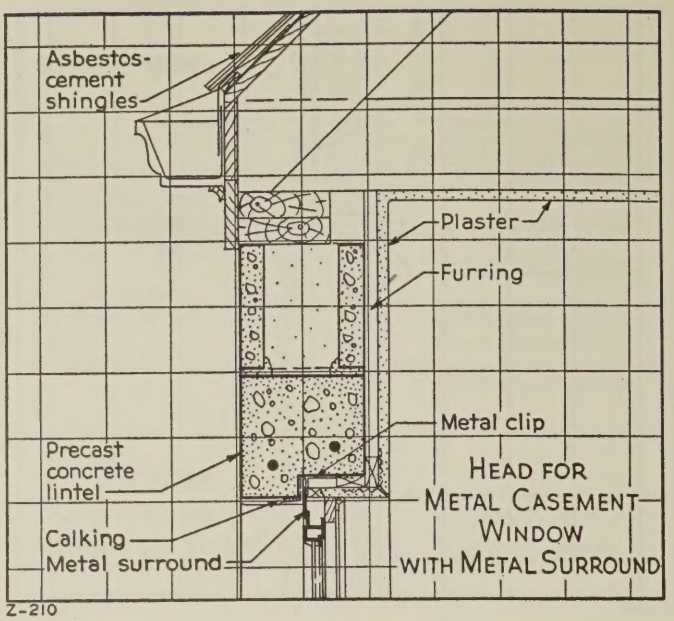

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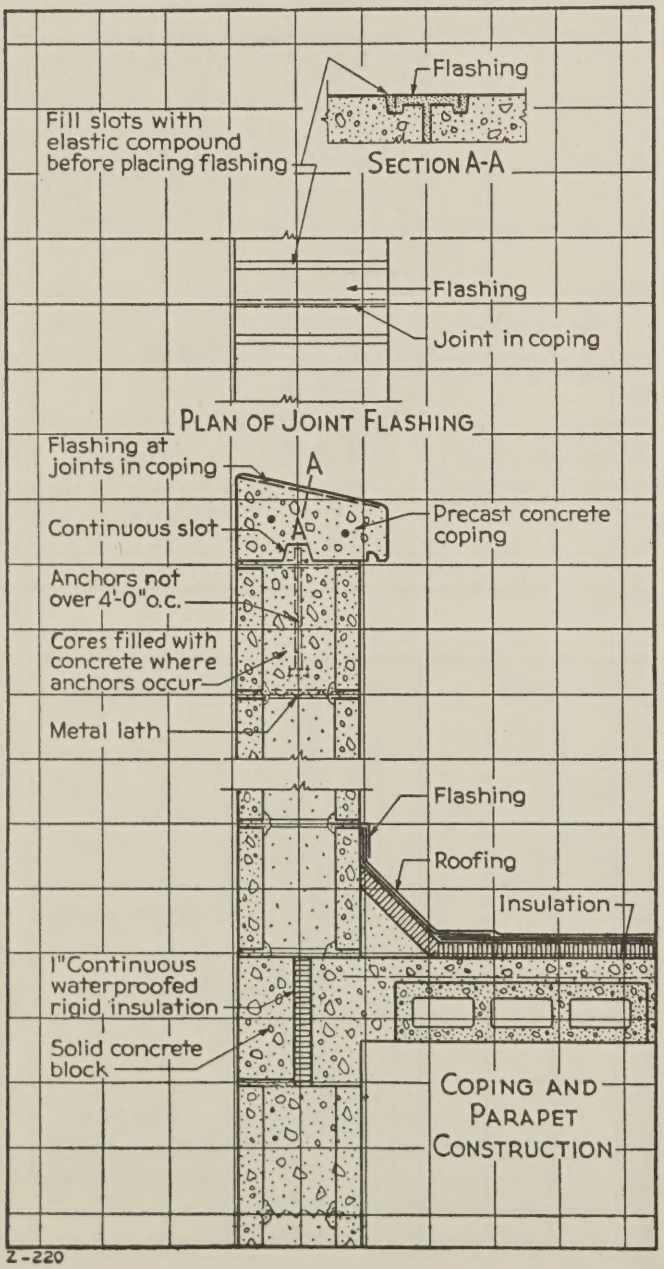

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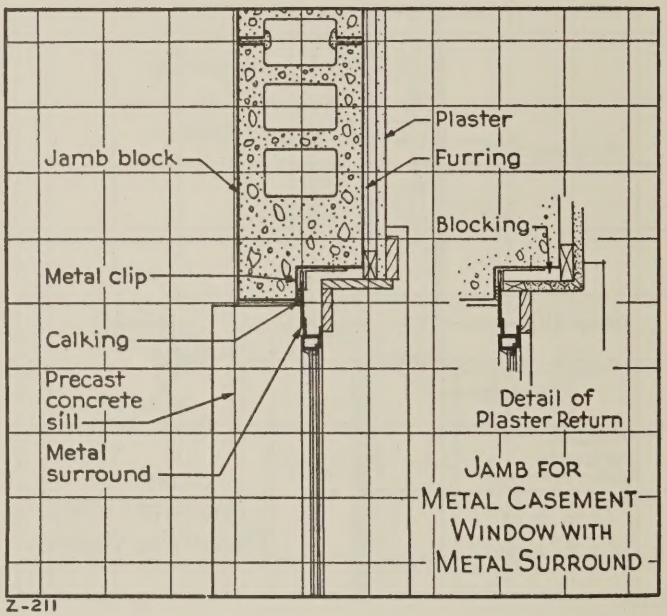
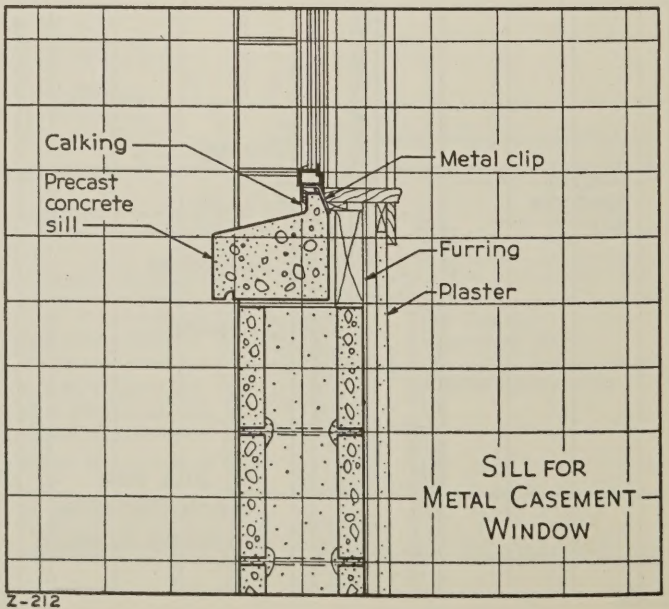
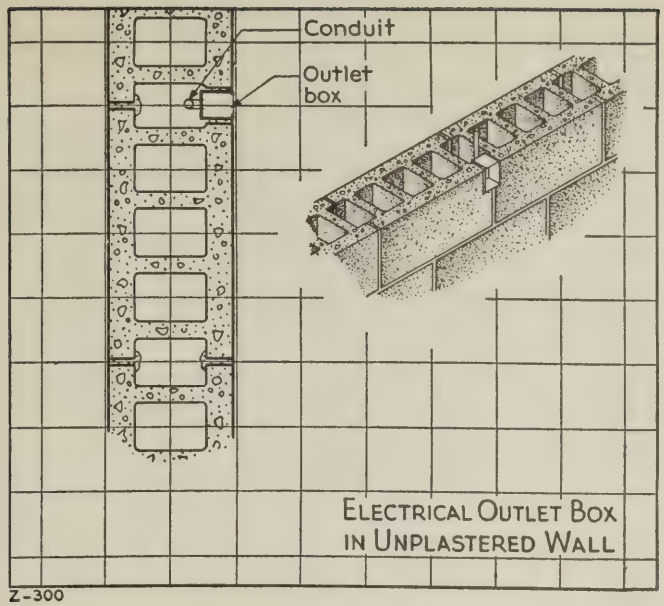


Z-211

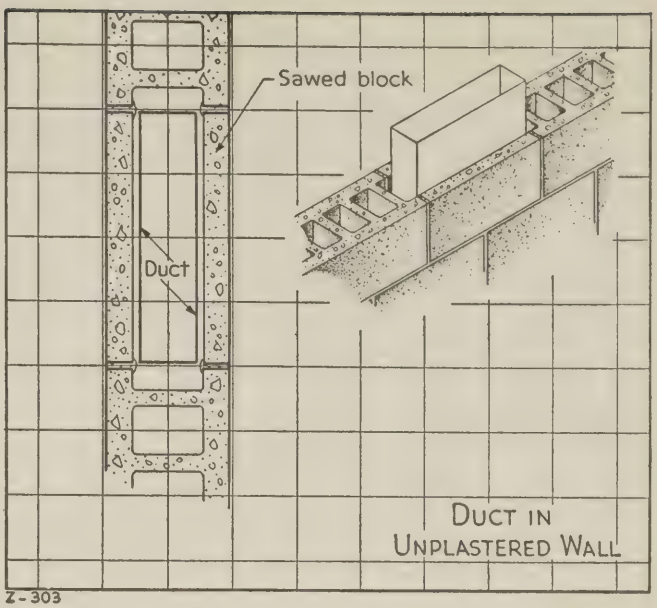


Z-212



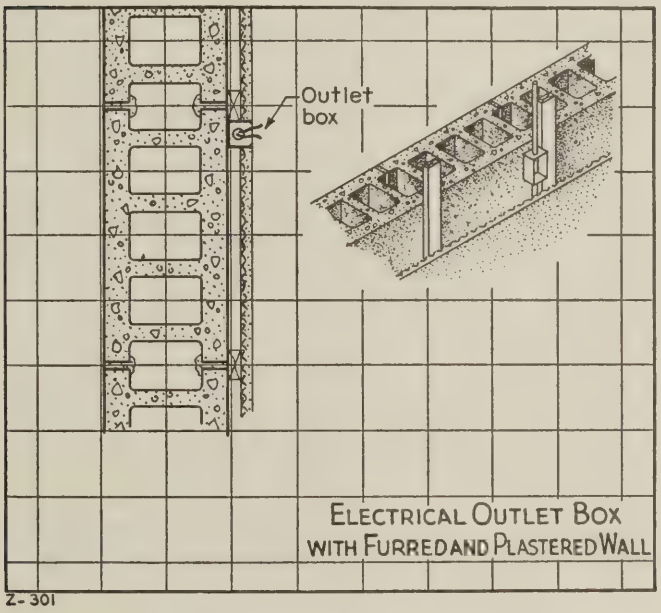
ELECTRICAL OUTLET BOX IN UNPLASTERED WALL

Z-300



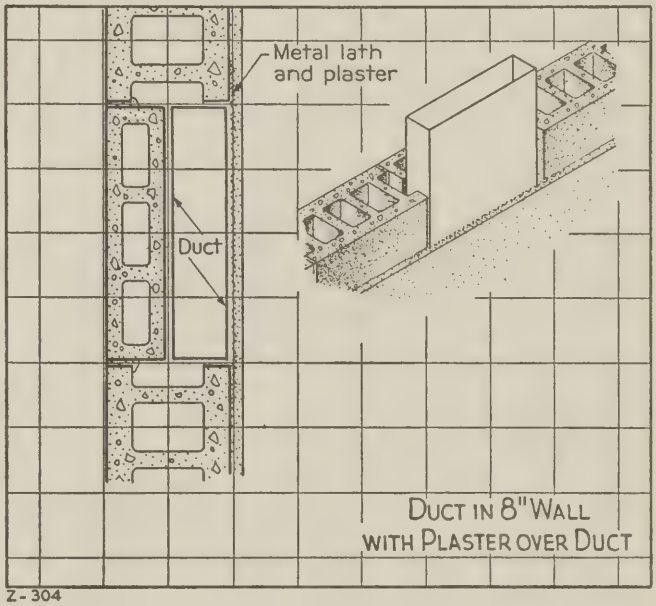
DUCT IN UNPLASTERED WALL

Z-303



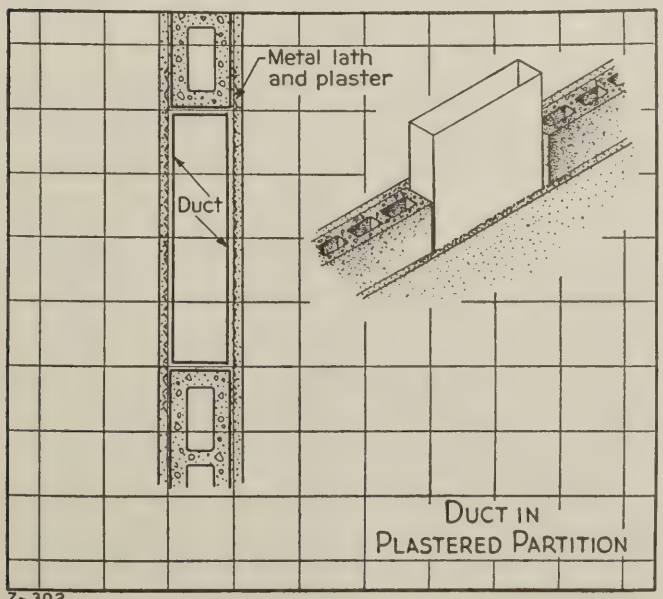
ELECTRICAL OUTLET BOX WITH FURRED AND PLASTERED WALL

Z-301



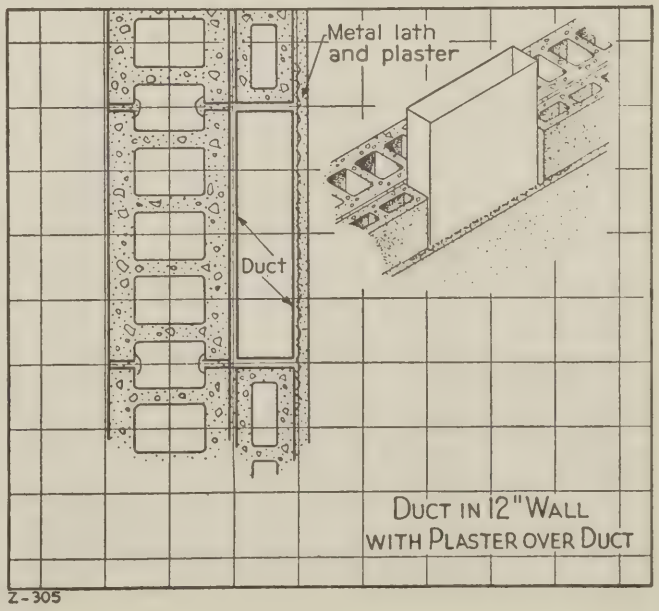
DUCT IN 8" WALL WITH PLASTER OVER DUCT

Z-304



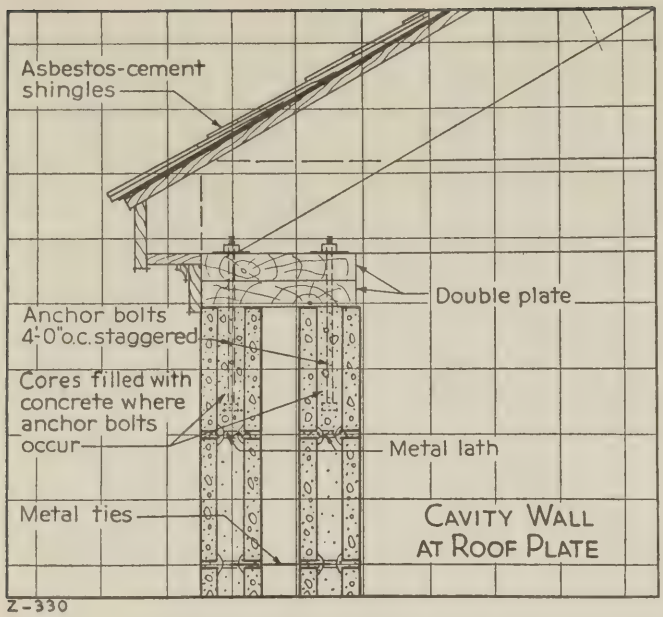
DUCT IN PLASTERED PARTITION

Z-302

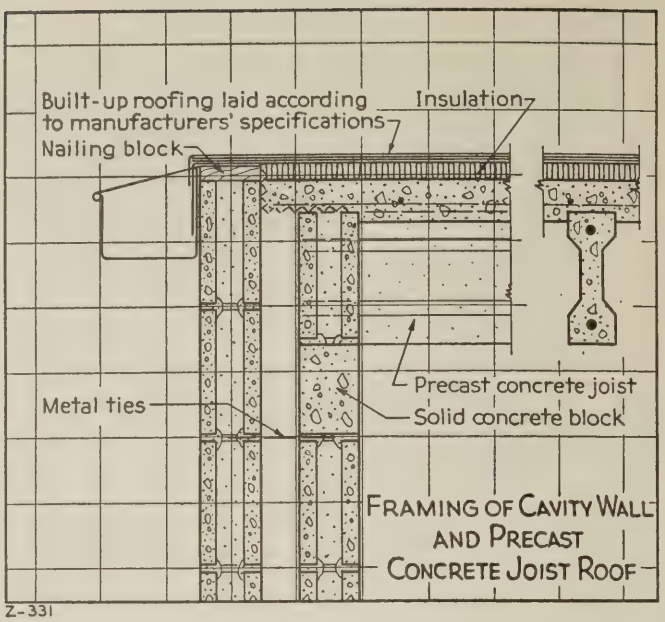


DUCT IN 12" WALL WITH PLASTER OVER DUCT

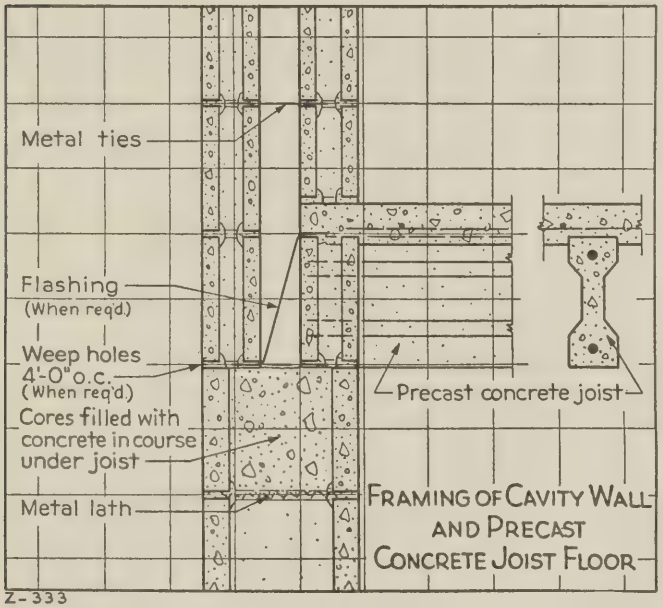
Z-305



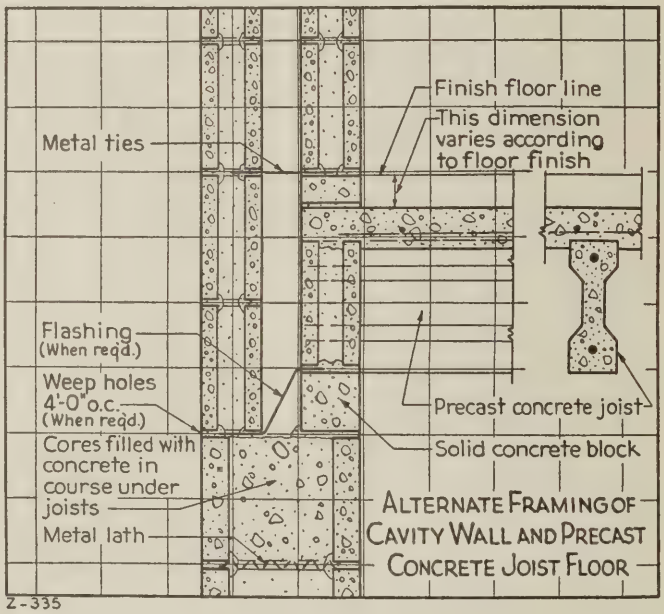
Z-330



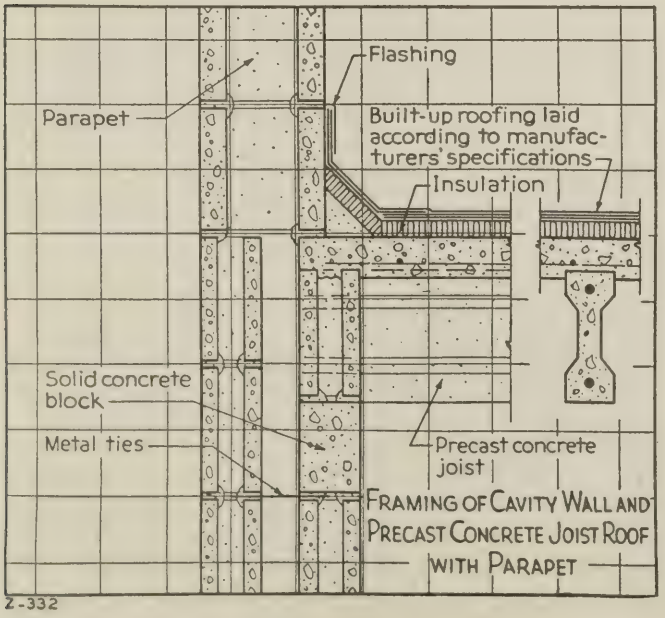
Z-331


Metal ties
Flashing (When req'd)
Weep holes 4'-0" o.c. (When req'd)
Cores filled with concrete in course under joist
Metal lath
Precast concrete joist
FRAMING OF CAVITY WALL AND PRECAST CONCRETE JOIST FLOOR

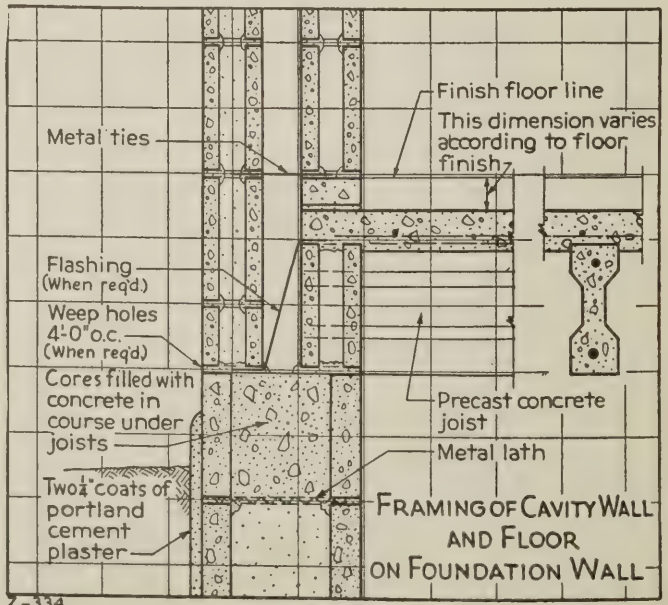
Z-333


Finish floor line
This dimension varies according to floor finish
Metal ties
Flashing (When req'd.)
Weep holes 4'-0" o.c. (When req'd.)
Cores filled with concrete in course under joists
Metal lath
Precast concrete joist
Solid concrete block
ALTERNATE FRAMING OF CAVITY WALL AND PRECAST CONCRETE JOIST FLOOR

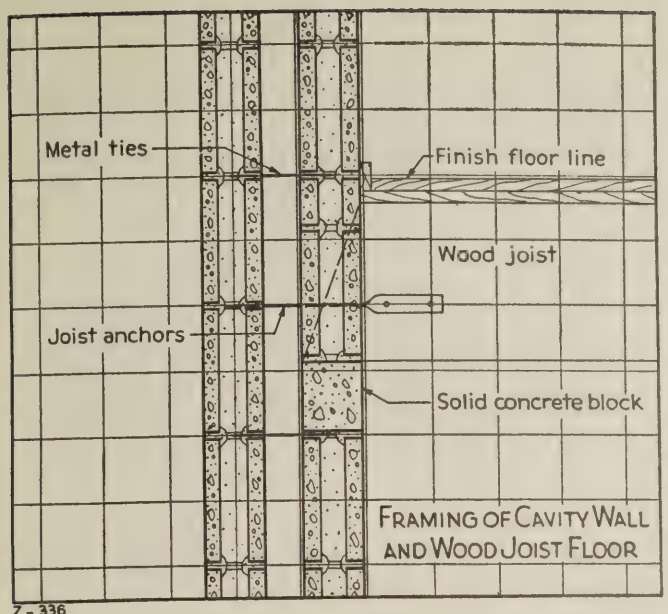
Z-335



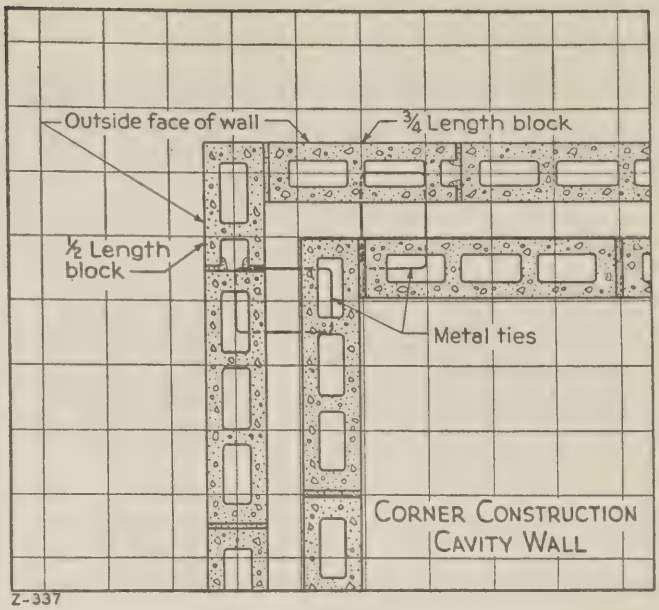
Z-332


Finish floor line
This dimension varies according to floor finish
Metal ties
Flashing (When req'd.)
Weep holes 4'-0" o.c. (When req'd)
Cores filled with concrete in course under joists
Two coats of portland cement plaster
Precast concrete joist
Metal lath
FRAMING OF CAVITY WALL AND FLOOR ON FOUNDATION WALL

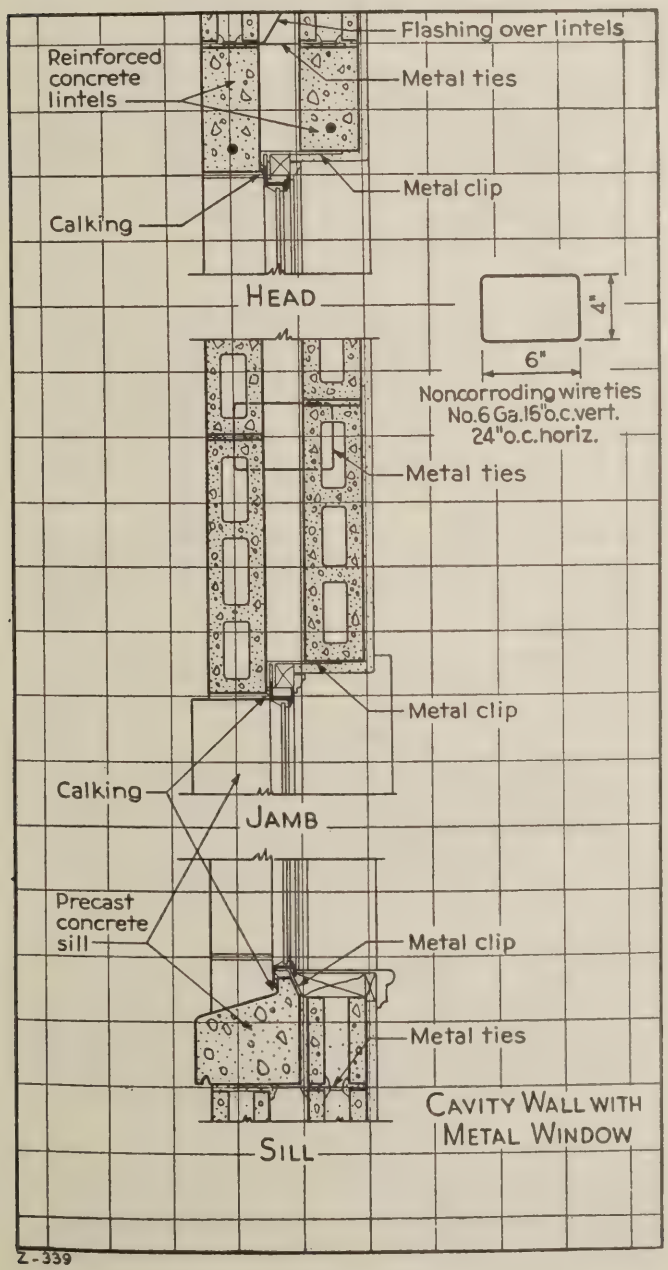
Z-334



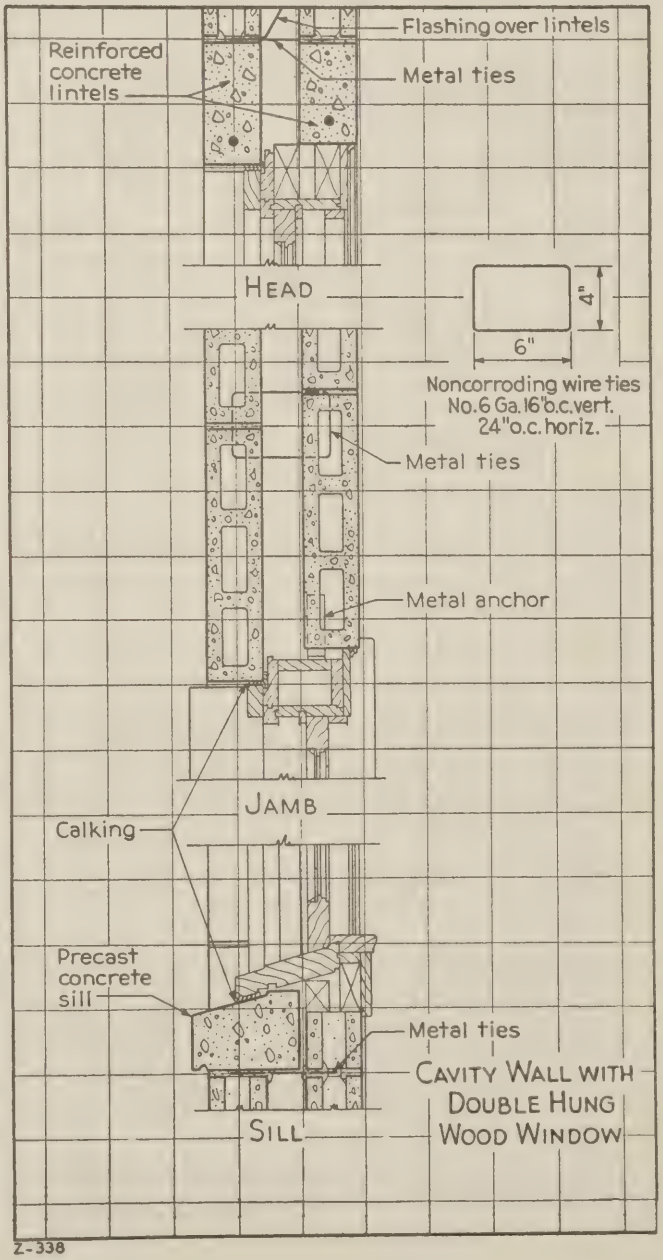
Z-336



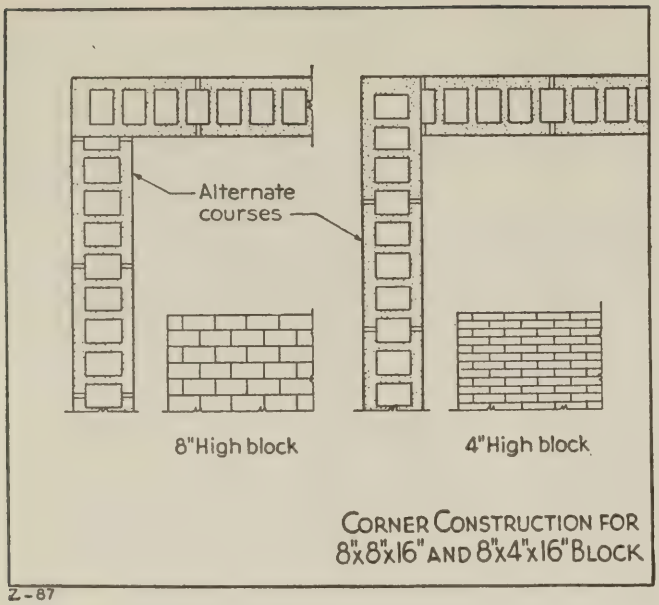
Z-337



Z-339

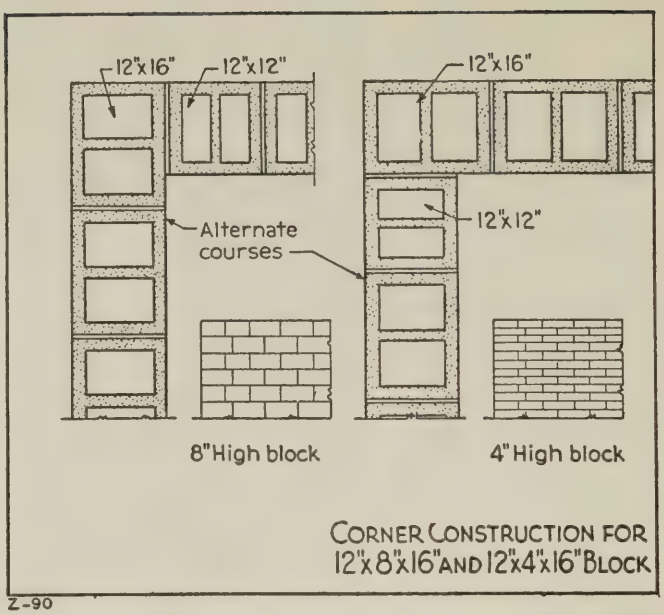


Z-338



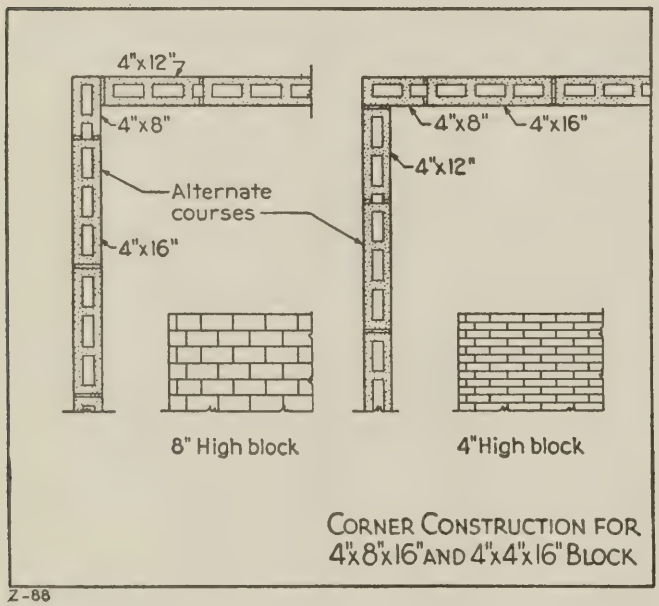
CORNER CONSTRUCTION FOR 8"x8"x16" AND 8"x4"x16" BLOCK

Z-87



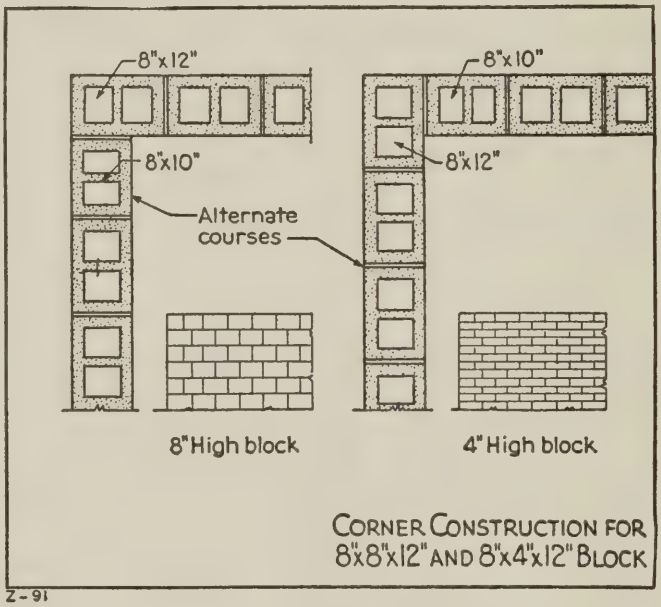
CORNER CONSTRUCTION FOR 12"x8"x16" AND 12"x4"x16" BLOCK

Z-90



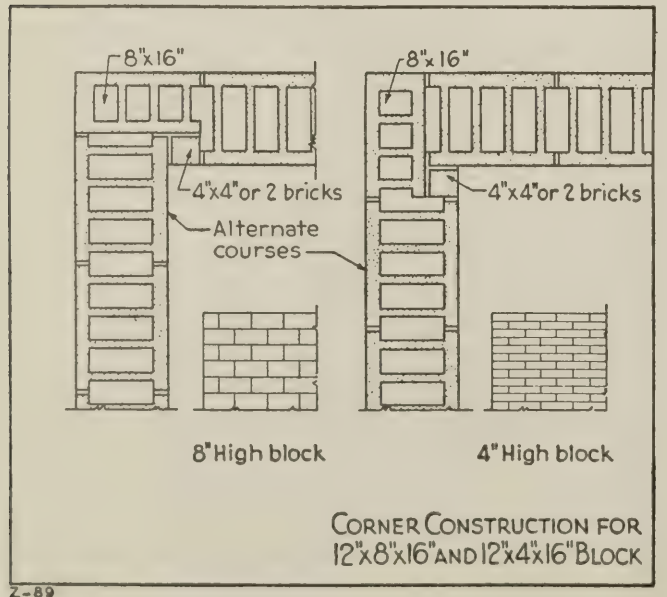
CORNER CONSTRUCTION FOR 4"x8"x16" AND 4"x4"x16" BLOCK

Z-88



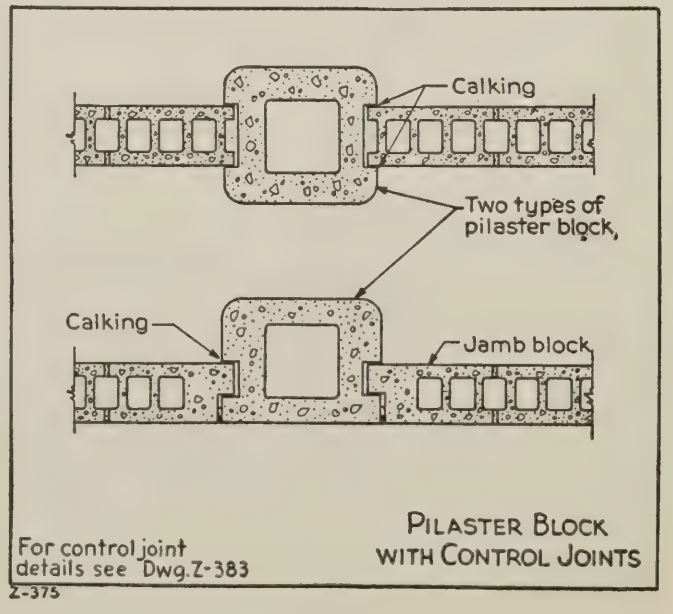
CORNER CONSTRUCTION FOR 8"x8"x12" AND 8"x4"x12" BLOCK

Z-91



CORNER CONSTRUCTION FOR 12"x8"x16" AND 12"x4"x16" BLOCK

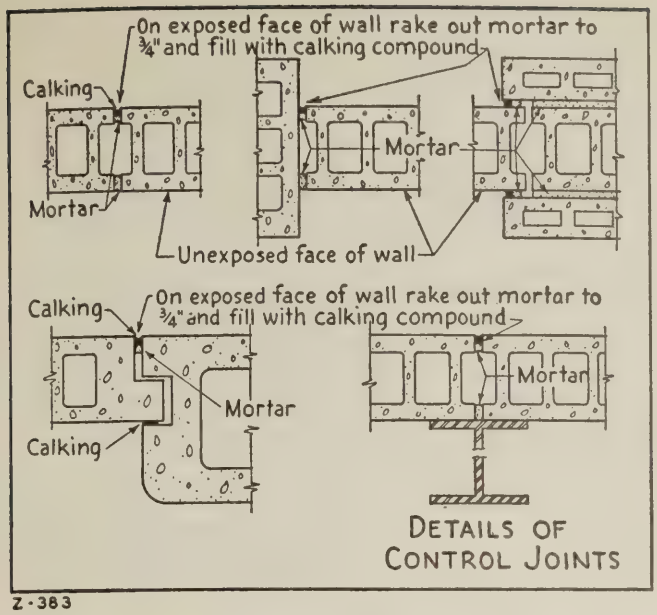
Z-89



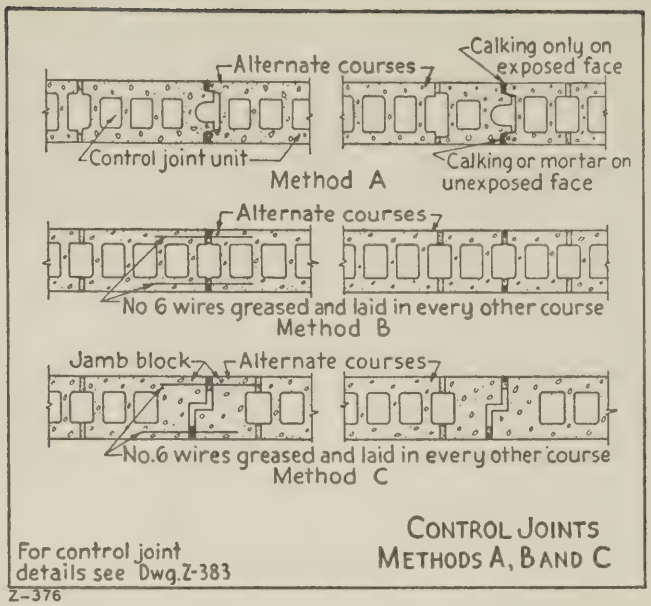
For control joint details see Dwg. Z-383

PILASTER BLOCK WITH CONTROL JOINTS

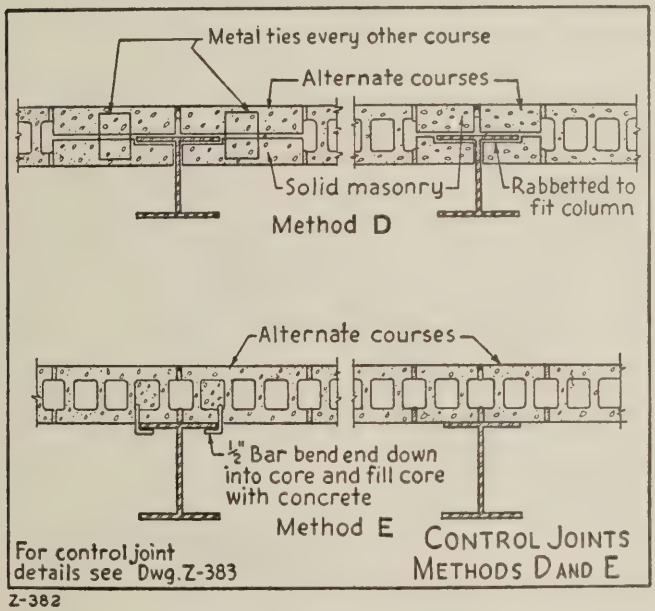
Z-375


On exposed face of wall rake out mortar to ¾" and fill with calking compound
Calking
Mortar
Mortar
Unexposed face of wall
Calking
On exposed face of wall rake out mortar to ¾" and fill with calking compound
Mortar
Mortar
Calking
DETAILS OF CONTROL JOINTS

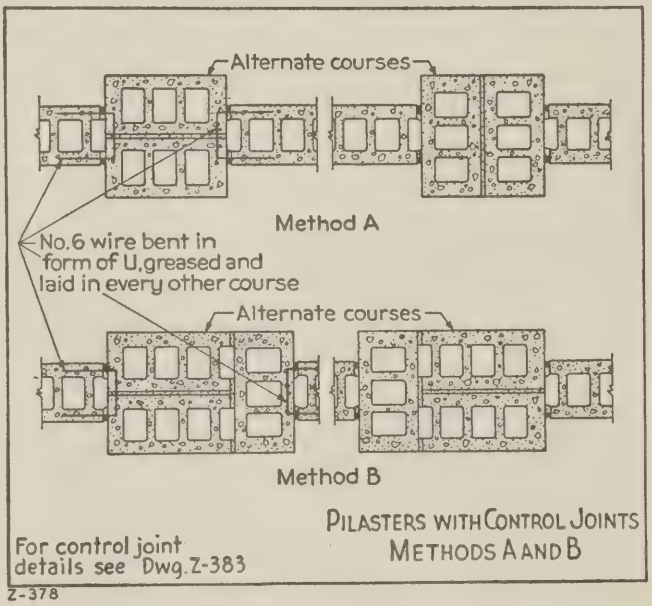
Z-383


Alternate courses
Calking only on exposed face
Control joint unit
Calking or mortar on unexposed face
Method A
Alternate courses
No 6 wires greased and laid in every other course
Method B
Jamb block
Alternate courses
No.6 wires greased and laid in every other course
Method C
For control joint details see Dwg.Z-383
CONTROL JOINTS METHODS A, B AND C

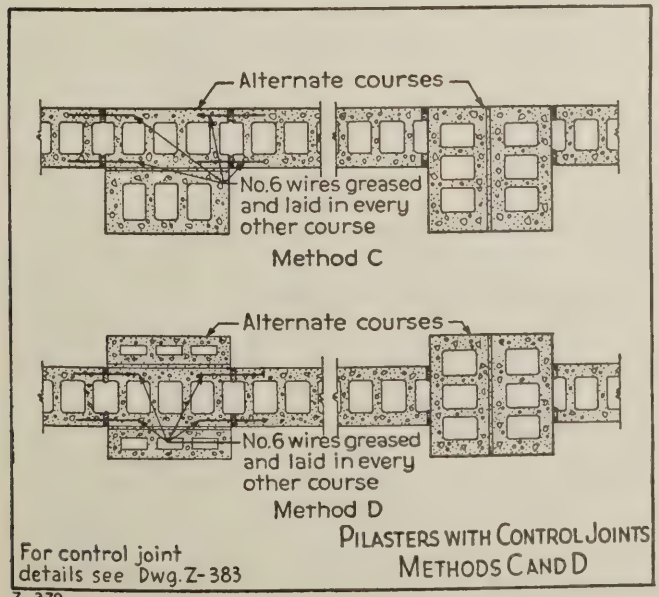
Z-376


Metal ties every other course
Alternate courses
Solid masonry
Rabbetted to fit column
Method D
Alternate courses
½" Bar bend end down into core and fill core with concrete
Method E
For control joint details see Dwg.Z-383
CONTROL JOINTS METHODS D AND E

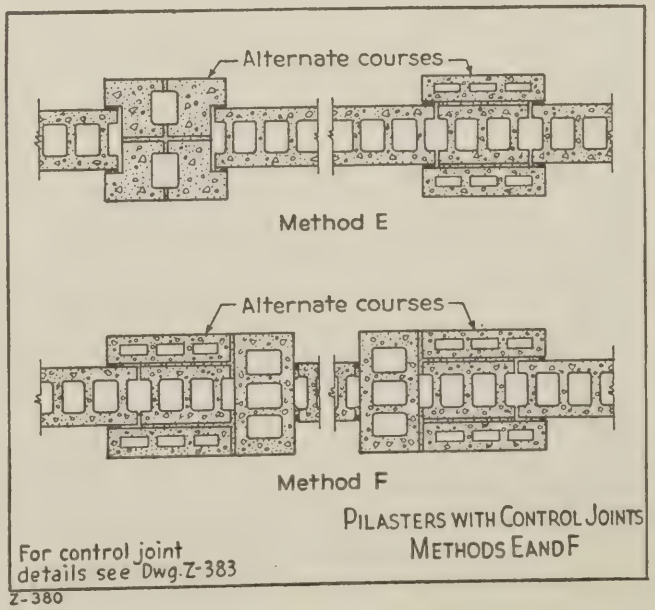
Z-382


Alternate courses
Method A
No.6 wire bent in form of U, greased and laid in every other course
Alternate courses
Method B
For control joint details see Dwg.Z-383
PILASTERS WITH CONTROL JOINTS METHODS A AND B

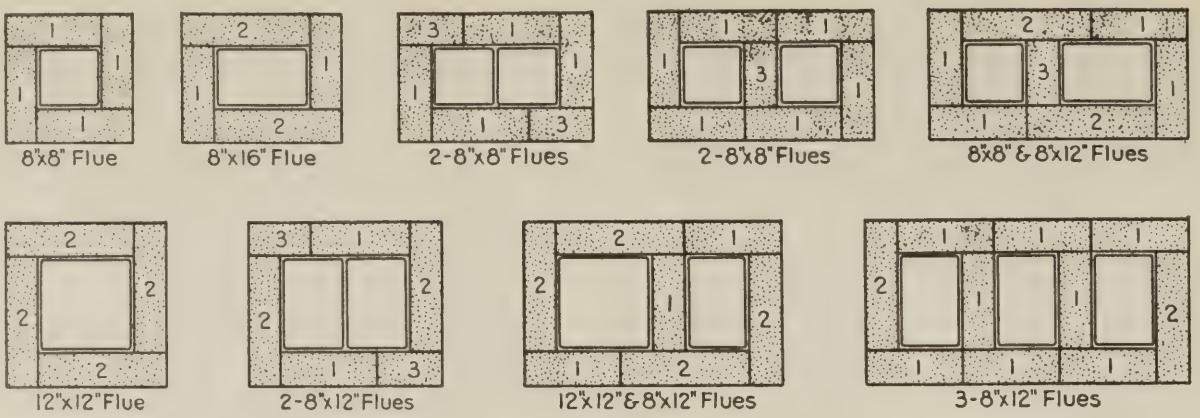
Z-378


Alternate courses
No.6 wires greased and laid in every other course
Method C
Alternate courses
No.6 wires greased and laid in every other course
Method D
For control joint details see Dwg.Z-383
PILASTERS WITH CONTROL JOINTS METHODS C AND D

Z-379

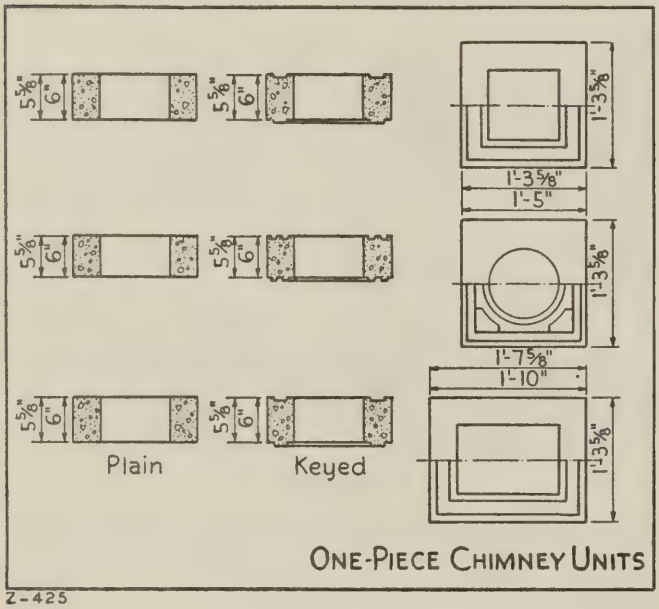


Z-380



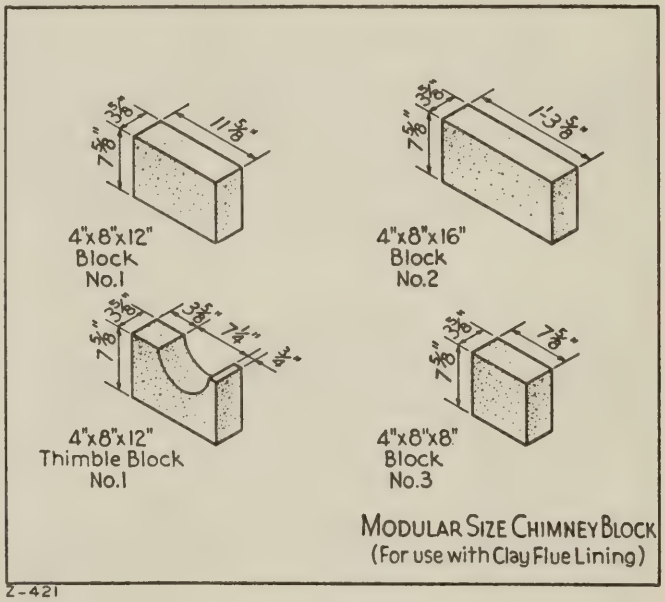
CONCRETE MASONRY CHIMNEYS
BLOCK LAYOUTS

Z-420



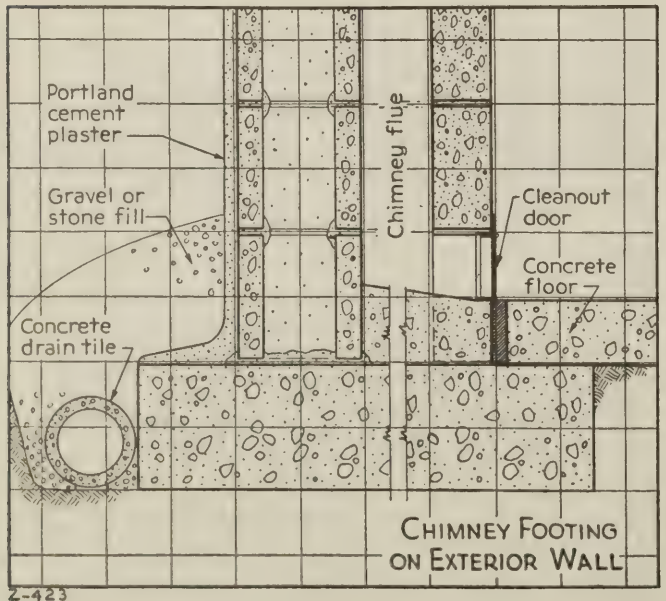
ONE-PIECE CHIMNEY UNITS

Z-425



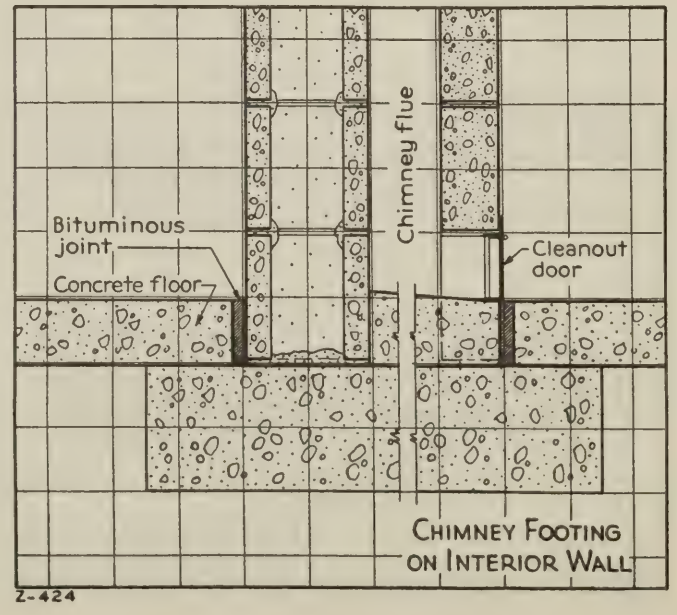
MODULAR SIZE CHIMNEY BLOCK
(For use with Clay Flue Lining)

Z-421



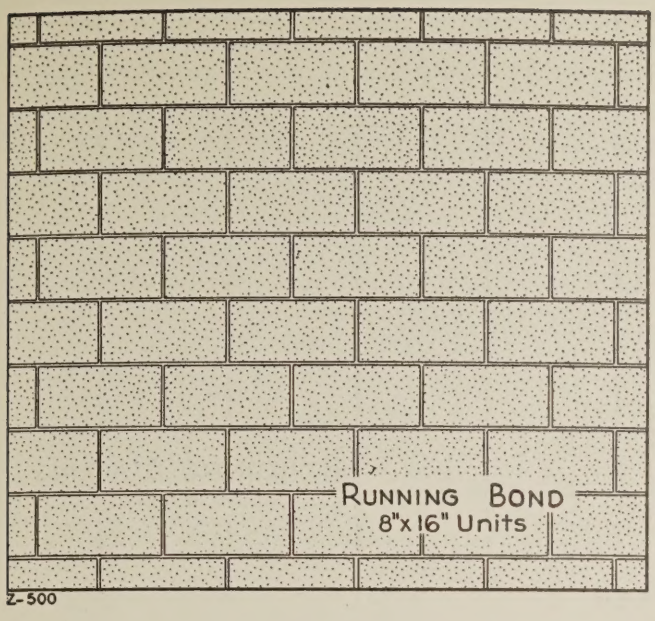
CHIMNEY FOOTING ON EXTERIOR WALL

Z-423

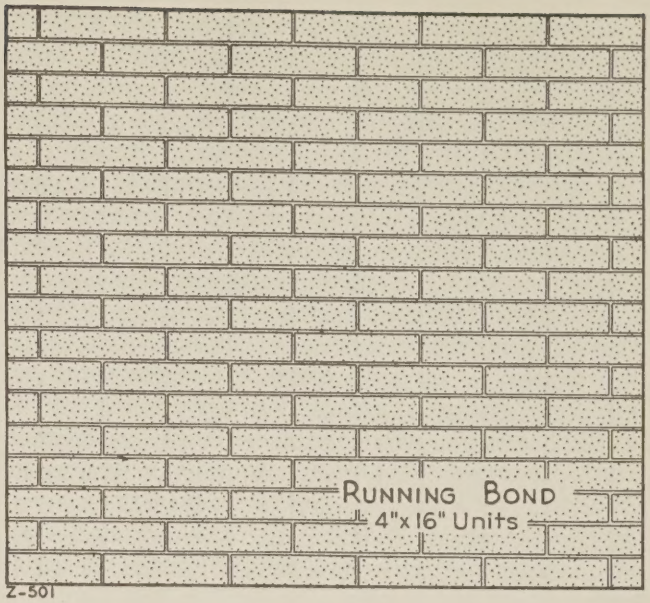


CHIMNEY FOOTING ON INTERIOR WALL

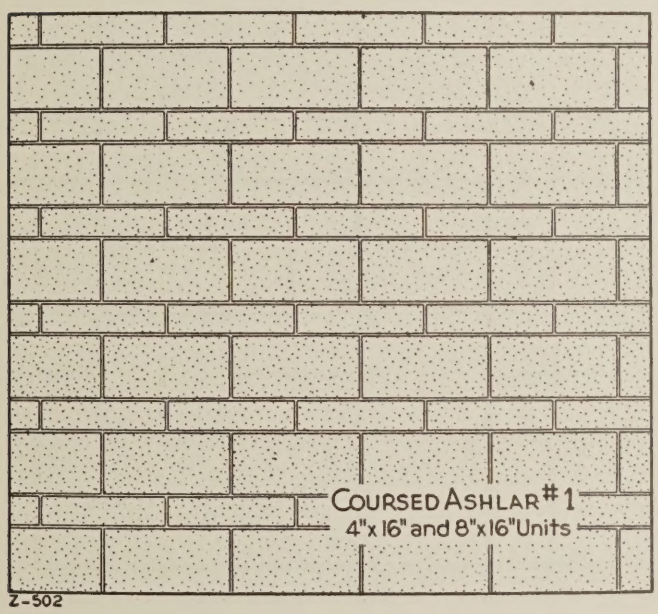
Z-424



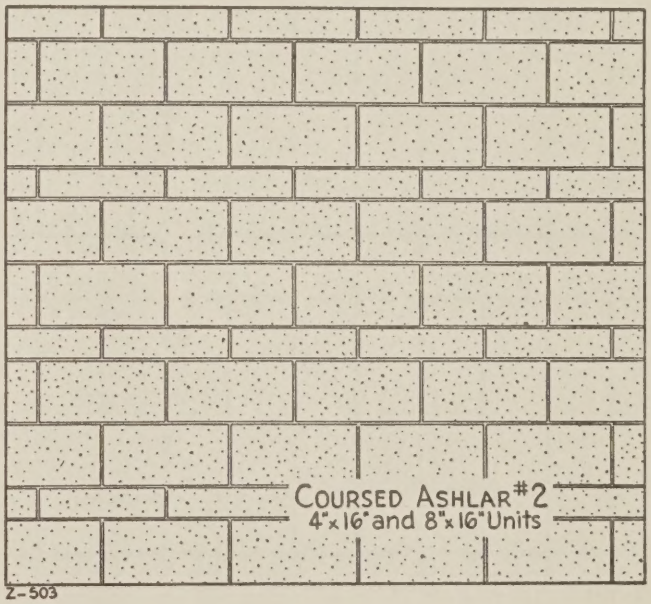
Z-500



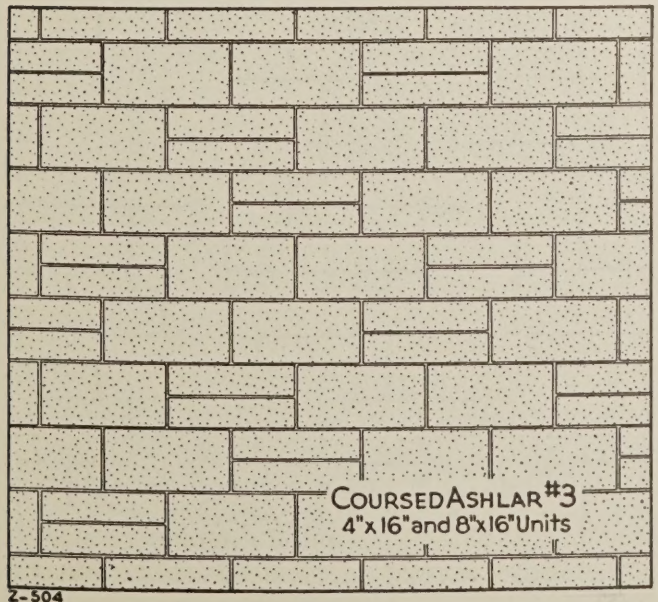
Z-501



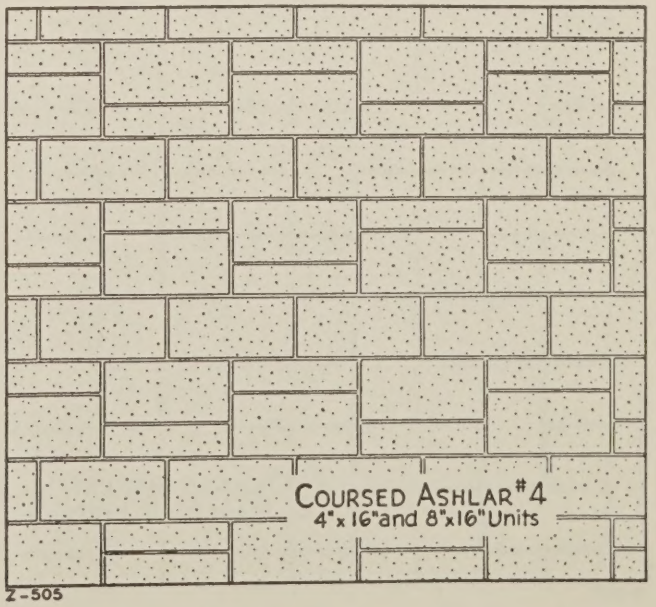
Z-502



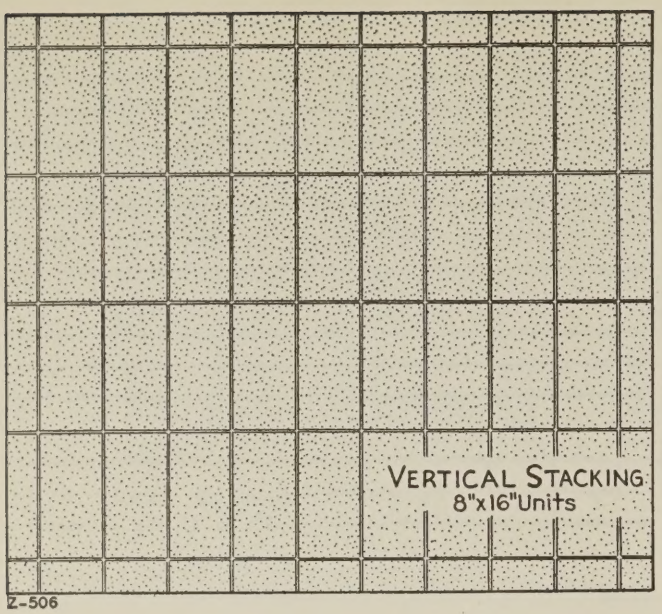
Z-503



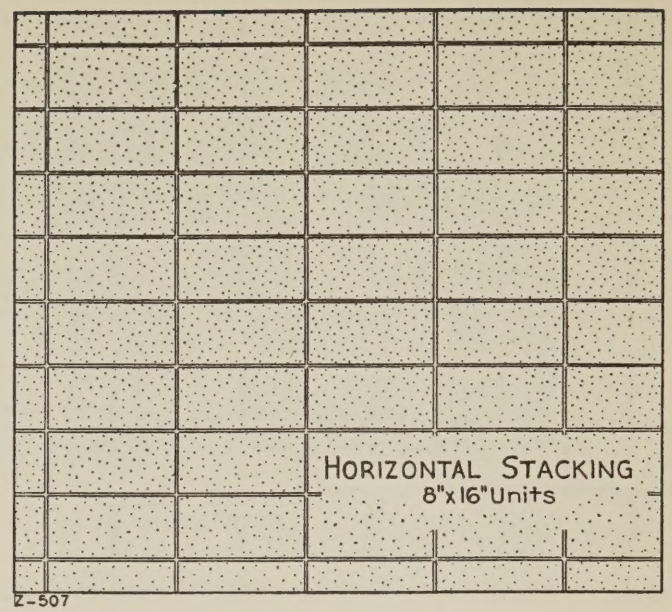
Z-504



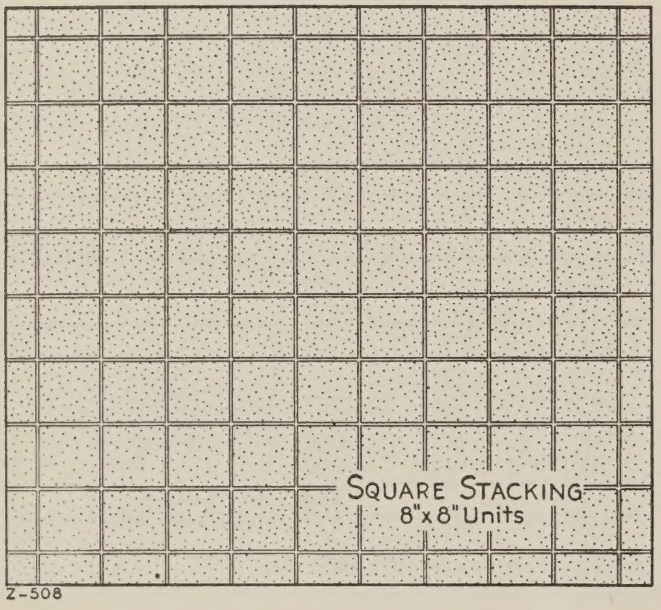
Z-505



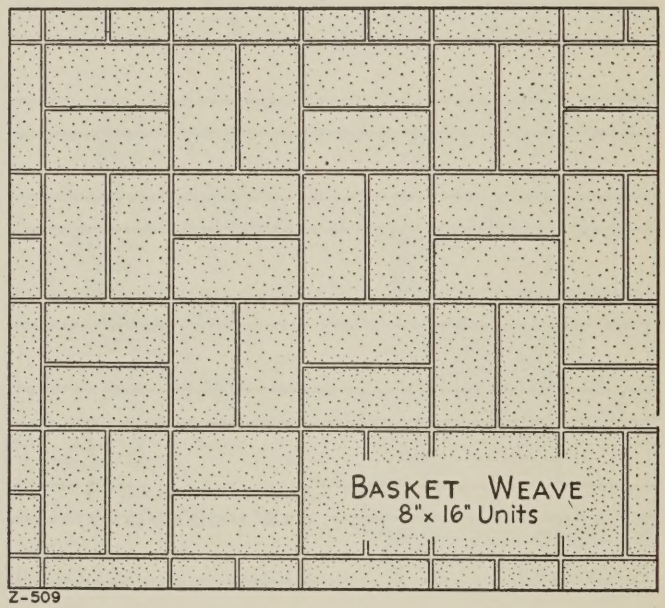
Z-506



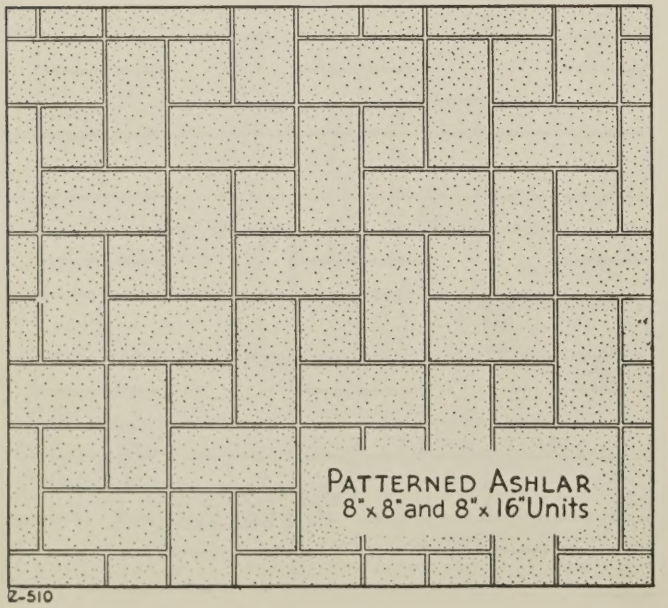
Z-507



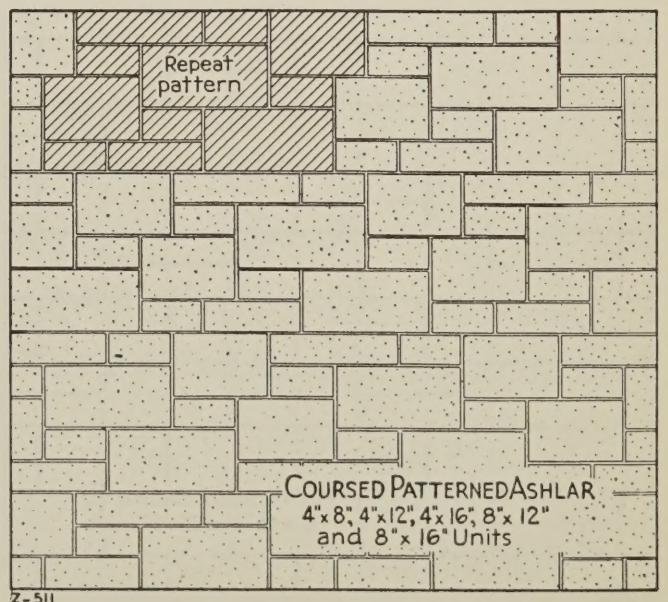
Z-508



Z-509



Z-510



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